

## SUBCHAPTER C—AIRCRAFT

### PART 21—CERTIFICATION PROCEDURES FOR PRODUCTS AND PARTS

SPECIAL FEDERAL AVIATION REGULATION NO. 88—FUEL TANK SYSTEM FAULT TOLERANCE EVALUATION REQUIREMENTS

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### SPECIAL FEDERAL AVIATION REGULATION NO. 88—FUEL TANK SYSTEM FAULT TOLERANCE EVALUATION REQUIRE- MENTS

1. *Applicability.* This SFAR applies to the holders of type certificates, and supplemental type certificates that may affect the airplane fuel tank system, for turbine-powered transport category airplanes, provided the type certificate was issued after January 1, 1958, and the airplane has either a maximum type certificated passenger capacity of 30 or more, or a maximum type certificated payload capacity of 7,500 pounds or more. This SFAR also applies to applicants for type certificates, amendments to a type certificate, and supplemental type certificates affecting the fuel tank systems for those airplanes identified above, if the application was filed before June 6, 2001, the effective date of this SFAR, and the certificate was not issued before June 6, 2001.

2. *Compliance:* Each type certificate holder, and each supplemental type certificate holder of a modification affecting the airplane fuel tank system, must accomplish the following within the compliance times specified in paragraph (e) of this section:

(a) Conduct a safety review of the airplane fuel tank system to determine that the design meets the requirements of §§ 25.901 and 25.981(a) and (b) of this chapter. If the current design does not meet these requirements, develop all design changes to the fuel tank system that are necessary to meet these requirements. The FAA (Aircraft Certification Office (ACO), or office of the Transport Airplane Directorate, having cognizance over the type certificate for the affected airplane) may grant an extension of the 18-month compliance time for development of design changes if:

- (1) The safety review is completed within the compliance time;
- (2) Necessary design changes are identified within the compliance time; and

(3) Additional time can be justified, based on the holder's demonstrated aggressiveness in performing the safety review, the complexity of the necessary design changes, the availability of interim actions to provide an acceptable level of safety, and the resulting level of safety.

(b) Develop all maintenance and inspection instructions necessary to maintain the design features required to preclude the existence or development of an ignition source within the fuel tank system of the airplane.

(c) Submit a report for approval to the FAA Aircraft Certification Office (ACO), or office of the Transport Airplane Directorate, having cognizance over the type certificate for the affected airplane, that:

(1) Provides substantiation that the airplane fuel tank system design, including all necessary design changes, meets the requirements of §§ 25.901 and 25.981(a) and (b) of this chapter; and

(2) Contains all maintenance and inspection instructions necessary to maintain the design features required to preclude the existence or development of an ignition source within the fuel tank system throughout the operational life of the airplane.

(d) The Aircraft Certification Office (ACO), or office of the Transport Airplane Directorate, having cognizance over the type certificate for the affected airplane, may approve a report submitted in accordance with paragraph 2(c) if it determines that any provisions of this SFAR not complied with are compensated for by factors that provide an equivalent level of safety.

(e) Each type certificate holder must comply no later than December 6, 2002, or within 18 months after the issuance of a type certificate for which application was filed before June 6, 2001, whichever is later; and each supplemental type certificate holder of a modification affecting the airplane fuel tank system must comply no later than June 6, 2003, or within 18 months after the issuance of a supplemental type certificate for which application was filed before June 6, 2001, whichever is later.

[Doc. No. 1999–6411, 66 FR 23129, May 7, 2001, as amended by Amdt. 21–82, 67 FR 57493, Sept. 10, 2002; 67 FR 70809, Nov. 26, 2002; Amdt. 21–82, 67 FR 72833, Dec. 9, 2002]

## Subpart A—General

### § 21.1 Applicability.

(a) This part prescribes—

(1) Procedural requirements for the issue of type certificates and changes to those certificates; the issue of production certificates; the issue of airworthiness certificates; and the issue of export airworthiness approvals.

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(2) Rules governing the holders of any certificate specified in paragraph (a)(1) of this section; and

(3) Procedural requirements for the approval of certain materials, parts, processes, and appliances.

(b) For the purposes of this part, the word “product” means an aircraft, aircraft engine, or propeller. In addition, for the purposes of Subpart L only, it includes components and parts of aircraft, of aircraft engines, and of propellers; also parts, materials, and appliances, approved under the Technical Standard Order system.

[Doc. No. 5085, 29 FR 14563, Oct. 24, 1964, as amended by Amdt. 21-2, 30 FR 8465, July 2, 1965; Amdt. 21-6, 30 FR 11379, Sept. 8, 1965]

### § 21.2 Falsification of applications, reports, or records.

(a) No person shall make or cause to be made—

(1) Any fraudulent or intentionally false statement on any application for a certificate or approval under this part;

(2) Any fraudulent or intentionally false entry in any record or report that is required to be kept, made, or used to show compliance with any requirement for the issuance or the exercise of the privileges of any certificate or approval issued under this part;

(3) Any reproduction for a fraudulent purpose of any certificate or approval issued under this part.

(4) Any alteration of any certificate or approval issued under this part.

(b) The commission by any person of an act prohibited under paragraph (a) of this section is a basis for suspending or revoking any certificate or approval issued under this part and held by that person.

[Doc. No. 23345, 57 FR 41367, Sept. 9, 1992]

### § 21.3 Reporting of failures, malfunctions, and defects.

(a) Except as provided in paragraph (d) of this section, the holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval (PMA), or a TSO authorization, or the licensee of a Type Certificate shall report any failure, malfunction, or defect in any product, part, process, or article manufactured by it that it determines has resulted in

any of the occurrences listed in paragraph (c) of this section.

(b) The holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval (PMA), or a TSO authorization, or the licensee of a Type of Certificate shall report any defect in any product, part, or article manufactured by it that has left its quality control system and that it determines could result in any of the occurrences listed in paragraph (c) of this section.

(c) The following occurrences must be reported as provided in paragraphs (a) and (b) of this section:

(1) Fires caused by a system or equipment failure, malfunction, or defect.

(2) An engine exhaust system failure, malfunction, or defect which causes damage to the engine, adjacent aircraft structure, equipment, or components.

(3) The accumulation or circulation of toxic or noxious gases in the crew compartment or passenger cabin.

(4) A malfunction, failure, or defect of a propeller control system.

(5) A propeller or rotorcraft hub or blade structural failure.

(6) Flammable fluid leakage in areas where an ignition source normally exists.

(7) A brake system failure caused by structural or material failure during operation.

(8) A significant aircraft primary structural defect or failure caused by any autogenous condition (fatigue, understrength, corrosion, etc.).

(9) Any abnormal vibration or buffeting caused by a structural or system malfunction, defect, or failure.

(10) An engine failure.

(11) Any structural or flight control system malfunction, defect, or failure which causes an interference with normal control of the aircraft for which derogates the flying qualities.

(12) A complete loss of more than one electrical power generating system or hydraulic power system during a given operation of the aircraft.

(13) A failure or malfunction of more than one attitude, airspeed, or altitude instrument during a given operation of the aircraft.

(d) The requirements of paragraph (a) of this section do not apply to—

(1) Failures, malfunctions, or defects that the holder of a Type Certificate (including a Supplemental Type Certificate), Parts Manufacturer Approval (PMA), or TSO authorization, or the licensee of a Type Certificate—

(i) Determines were caused by improper maintenance, or improper usage;

(ii) Knows were reported to the FAA by another person under the Federal Aviation Regulations; or

(iii) Has already reported under the accident reporting provisions of Part 430 of the regulations of the National Transportation Safety Board.

(2) Failures, malfunctions, or defects in products, parts, or articles manufactured by a foreign manufacturer under a U.S. Type Certificate issued under § 21.29 or § 21.617, or exported to the United States under § 21.502.

(e) Each report required by this section—

(1) Shall be made to the Aircraft Certification Office in the region in which the person required to make the report is located within 24 hours after it has determined that the failure, malfunction, or defect required to be reported has occurred. However, a report that is due on a Saturday or a Sunday may be delivered on the following Monday and one that is due on a holiday may be delivered on the next workday;

(2) Shall be transmitted in a manner and form acceptable to the Administrator and by the most expeditious method available; and

(3) Shall include as much of the following information as is available and applicable:

(i) Aircraft serial number.

(ii) When the failure, malfunction, or defect is associated with an article approved under a TSO authorization, the article serial number and model designation, as appropriate.

(iii) When the failure, malfunction, or defect is associated with an engine or propeller, the engine or propeller serial number, as appropriate.

(iv) Product model.

(v) Identification of the part, component, or system involved. The identification must include the part number.

(vi) Nature of the failure, malfunction, or defect.

(f) Whenever the investigation of an accident or service difficulty report shows that an article manufactured under a TSO authorization is unsafe because of a manufacturing or design defect, the manufacturer shall, upon request of the Administrator, report to the Administrator the results of its investigation and any action taken or proposed by the manufacturer to correct that defect. If action is required to correct the defect in existing articles, the manufacturer shall submit the data necessary for the issuance of an appropriate airworthiness directive to the Manager of the Aircraft Certification Office for the geographic area of the FAA regional office in the region in which it is located.

[Amdt. 21-36, 35 FR 18187, Nov. 28, 1970, as amended by Amdt. 21-37, 35 FR 18450, Dec. 4, 1970; Amdt. 21-50, 45 FR 38346, June 9, 1980; Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

#### **§ 21.5 Airplane or Rotorcraft Flight Manual.**

(a) With each airplane or rotorcraft that was not type certificated with an Airplane or Rotorcraft Flight Manual and that has had no flight time prior to March 1, 1979, the holder of a Type Certificate (including a Supplemental Type Certificate) or the licensee of a Type Certificate shall make available to the owner at the time of delivery of the aircraft a current approved Airplane or Rotorcraft Flight Manual.

(b) The Airplane or Rotorcraft Flight Manual required by paragraph (a) of this section must contain the following information:

(1) The operating limitations and information required to be furnished in an Airplane or Rotorcraft Flight Manual or in manual material, markings, and placards, by the applicable regulations under which the airplane or rotorcraft was type certificated.

(2) The maximum ambient atmospheric temperature for which engine cooling was demonstrated must be stated in the performance information section of the Flight Manual, if the applicable regulations under which the aircraft was type certificated do not require ambient temperature on engine cooling operating limitations in the Flight Manual.

[Amdt. 21-46, 43 FR 2316, Jan. 16, 1978]

**Subpart B—Type Certificates**

SOURCE: Docket No. 5085, 29 FR 14564, Oct. 24, 1964, unless otherwise noted.

**§ 21.11 Applicability.**

This subpart prescribes—

(a) Procedural requirements for the issue of type certificates for aircraft, aircraft engines, and propellers; and

(b) Rules governing the holders of those certificates.

**§ 21.13 Eligibility.**

Any interested person may apply for a type certificate.

[Amdt. 21–25, 34 FR 14068, Sept. 5, 1969]

**§ 21.15 Application for type certificate.**

(a) An application for a type certificate is made on a form and in a manner prescribed by the Administrator and is submitted to the appropriate Aircraft Certification Office.

(b) An application for an aircraft type certificate must be accompanied by a three-view drawing of that aircraft and available preliminary basic data.

(c) An application for an aircraft engine type certificate must be accompanied by a description of the engine design features, the engine operating characteristics, and the proposed engine operating limitations.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21–40, 39 FR 35459, Oct. 1, 1974; Amdt. 21–67, 54 FR 39291, Sept. 25, 1989]

**§ 21.16 Special conditions.**

If the Administrator finds that the airworthiness regulations of this subchapter do not contain adequate or appropriate safety standards for an aircraft, aircraft engine, or propeller because of a novel or unusual design feature of the aircraft, aircraft engine or propeller, he prescribes special conditions and amendments thereto for the product. The special conditions are issued in accordance with Part 11 of this chapter and contain such safety standards for the aircraft, aircraft engine or propeller as the Administrator finds necessary to establish a level of

safety equivalent to that established in the regulations.

[Amdt. 21–19, 32 FR 17851, Dec. 13, 1967; as amended by Amdt. 21–51, 45 FR 60170, Sept. 11, 1980]

**§ 21.17 Designation of applicable regulations.**

(a) Except as provided in § 23.2, § 25.2, § 27.2, § 29.2 and in parts 34 and 36 of this chapter, an applicant for a type certificate must show that the aircraft, aircraft engine, or propeller concerned meets—

(1) The applicable requirements of this subchapter that are effective on the date of application for that certificate unless—

(i) Otherwise specified by the Administrator; or

(ii) Compliance with later effective amendments is elected or required under this section; and

(2) Any special conditions prescribed by the Administrator.

(b) For special classes of aircraft, including the engines and propellers installed thereon (e.g., gliders, airships, and other nonconventional aircraft), for which airworthiness standards have not been issued under this subchapter, the applicable requirements will be the portions of those other airworthiness requirements contained in Parts 23, 25, 27, 29, 31, 33, and 35 found by the Administrator to be appropriate for the aircraft and applicable to a specific type design, or such airworthiness criteria as the Administrator may find provide an equivalent level of safety to those parts.

(c) An application for type certification of a transport category aircraft is effective for 5 years and an application for any other type certificate is effective for 3 years, unless an applicant shows at the time of application that his product requires a longer period of time for design, development, and testing, and the Administrator approves a longer period.

(d) In a case where a type certificate has not been issued, or it is clear that a type certificate will not be issued, within the time limit established under paragraph (c) of this section, the applicant may—

(1) File a new application for a type certificate and comply with all the provisions of paragraph (a) of this section applicable to an original application; or

(2) File for an extension of the original application and comply with the applicable airworthiness requirements of this subchapter that were effective on a date, to be selected by the applicant, not earlier than the date which precedes the date of issue of the type certificate by the time limit established under paragraph (c) of this section for the original application.

(e) If an applicant elects to comply with an amendment to this subchapter that is effective after the filing of the application for a type certificate, he must also comply with any other amendment that the Administrator finds is directly related.

(f) For primary category aircraft, the requirements are:

(1) The applicable airworthiness requirements contained in parts 23, 27, 31, 33, and 35 of this subchapter, or such other airworthiness criteria as the Administrator may find appropriate and applicable to the specific design and intended use and provide a level of safety acceptable to the Administrator.

(2) The noise standards of part 36 applicable to primary category aircraft.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-19, 32 FR 17851, Dec. 13, 1967; Amdt. 21-24, 34 FR 364, Jan. 10, 1969; Amdt. 21-42, 40 FR 1033, Jan. 6, 1975; Amdt. 21-58, 50 FR 46877, Nov. 13, 1985; Amdt. 21-60, 52 FR 8042, Mar. 13, 1987; Amdt. 21-68, 55 FR 32860, Aug. 10, 1990; Amdt. 21-69, 56 FR 41051, Aug. 16, 1991; Amdt. 21-70, 57 FR 41367, Sept. 9, 1992]

#### § 21.19 Changes requiring a new type certificate.

Each person who proposes to change a product must apply for a new type certificate if the Administrator finds that the proposed change in design, power, thrust, or weight is so extensive that a substantially complete investigation of compliance with the applicable regulations is required.

[Doc. No. 28903, 65 FR 36265, June 7, 2000]

#### § 21.21 Issue of type certificate: normal, utility, acrobatic, commuter, and transport category aircraft; manned free balloons; special classes of aircraft; aircraft engines; propellers.

An applicant is entitled to a type certificate for an aircraft in the normal, utility, acrobatic, commuter, or transport category, or for a manned free balloon, special class of aircraft, or an aircraft engine or propeller, if—

(a) The product qualifies under § 21.27; or

(b) The applicant submits the type design, test reports, and computations necessary to show that the product to be certificated meets the applicable airworthiness, aircraft noise, fuel venting, and exhaust emission requirements of the Federal Aviation Regulations and any special conditions prescribed by the Administrator, and the Administrator finds—

(1) Upon examination of the type design, and after completing all tests and inspections, that the type design and the product meet the applicable noise, fuel venting, and emissions requirements of the Federal Aviation Regulations, and further finds that they meet the applicable airworthiness requirements of the Federal Aviation Regulations or that any airworthiness provisions not complied with are compensated for by factors that provide an equivalent level of safety; and

(2) For an aircraft, that no feature or characteristic makes it unsafe for the category in which certification is requested.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-15, 32 FR 3735, Mar. 4, 1967; Amdt. 21-27, 34 FR 18368, Nov. 18, 1969; Amdt. 21-60, 52 FR 8042, Mar. 13, 1987; Amdt. 21-68, 55 FR 32860, Aug. 10, 1990]

#### § 21.23 [Reserved]

#### § 21.24 Issuance of type certificate: primary category aircraft.

(a) The applicant is entitled to a type certificate for an aircraft in the primary category if—

(1) The aircraft—

(i) Is unpowered; is an airplane powered by a single, naturally aspirated engine with a 61-knot or less  $V_{so}$  stall

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speed as defined in § 23.49; or is a rotorcraft with a 6-pound per square foot main rotor disc loading limitation, under sea level standard day conditions;

(ii) Weighs not more than 2,700 pounds; or, for seaplanes, not more than 3,375 pounds;

(iii) Has a maximum seating capacity of not more than four persons, including the pilot; and

(iv) Has an unpressurized cabin.

(2) The applicant has submitted—

(i) Except as provided by paragraph (c) of this section, a statement, in a form and manner acceptable to the Administrator, certifying that: the applicant has completed the engineering analysis necessary to demonstrate compliance with the applicable airworthiness requirements; the applicant has conducted appropriate flight, structural, propulsion, and systems tests necessary to show that the aircraft, its components, and its equipment are reliable and function properly; the type design complies with the airworthiness standards and noise requirements established for the aircraft under § 21.17(f); and no feature or characteristic makes it unsafe for its intended use;

(ii) The flight manual required by § 21.5(b), including any information required to be furnished by the applicable airworthiness standards;

(iii) Instructions for continued airworthiness in accordance with § 21.50(b); and

(iv) A report that: summarizes how compliance with each provision of the type certification basis was determined; lists the specific documents in which the type certification data information is provided; lists all necessary drawings and documents used to define the type design; and lists all the engineering reports on tests and computations that the applicant must retain and make available under § 21.49 to substantiate compliance with the applicable airworthiness standards.

(3) The Administrator finds that—

(i) The aircraft complies with those applicable airworthiness requirements approved under § 21.17(f) of this part; and

(ii) The aircraft has no feature or characteristic that makes it unsafe for its intended use.

(b) An applicant may include a special inspection and preventive maintenance program as part of the aircraft's type design or supplemental type design.

(c) For aircraft manufactured outside of the United States in a country with which the United States has a bilateral airworthiness agreement for the acceptance of these aircraft, and from which the aircraft is to be imported into the United States—

(1) The statement required by paragraph (a)(2)(i) of this section must be made by the civil airworthiness authority of the exporting country; and

(2) The required manuals, placards, listings, instrument markings, and documents required by paragraphs (a) and (b) of this section must be submitted in English.

[Doc. No. 23345, 57 FR 41367, Sept. 9, 1992; as amended by Amdt. 21–75, 62 FR 62808, Nov. 25, 1997]

### § 21.25 Issue of type certificate: Restricted category aircraft.

(a) An applicant is entitled to a type certificate for an aircraft in the restricted category for special purpose operations if he shows compliance with the applicable noise requirements of Part 36 of this chapter, and if he shows that no feature or characteristic of the aircraft makes it unsafe when it is operated under the limitations prescribed for its intended use, and that the aircraft—

(1) Meets the airworthiness requirements of an aircraft category except those requirements that the Administrator finds inappropriate for the special purpose for which the aircraft is to be used; or

(2) Is of a type that has been manufactured in accordance with the requirements of and accepted for use by, an Armed Force of the United States and has been later modified for a special purpose.

(b) For the purposes of this section, “special purpose operations” includes—

(1) Agricultural (spraying, dusting, and seeding, and livestock and predatory animal control);

(2) Forest and wildlife conservation;



(3) Aerial surveying (photography, mapping, and oil and mineral exploration);

(4) Patrolling (pipelines, power lines, and canals);

(5) Weather control (cloud seeding);

(6) Aerial advertising (skywriting, banner towing, airborne signs and public address systems); and

(7) Any other operation specified by the Administrator.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-42, 40 FR 1033, Jan. 6, 1975]

**§ 21.27 Issue of type certificate: surplus aircraft of the Armed Forces.**

(a) Except as provided in paragraph (b) of this section an applicant is entitled to a type certificate for an aircraft in the normal, utility, acrobatic, commuter, or transport category that was designed and constructed in the United States, accepted for operational use, and declared surplus by, an Armed Force of the United States, and that is shown to comply with the applicable certification requirements in paragraph (f) of this section.

(b) An applicant is entitled to a type certificate for a surplus aircraft of the Armed Forces of the United States that is a counterpart of a previously type certificated civil aircraft, if he shows compliance with the regulations governing the original civil aircraft type certificate.

(c) Aircraft engines, propellers, and their related accessories installed in surplus Armed Forces aircraft, for

which a type certificate is sought under this section, will be approved for use on those aircraft if the applicant shows that on the basis of the previous military qualifications, acceptance, and service record, the product provides substantially the same level of airworthiness as would be provided if the engines or propellers were type certificated under Part 33 or 35 of the Federal Aviation Regulations.

(d) The Administrator may relieve an applicant from strict compliance with a specific provision of the applicable requirements in paragraph (f) of this section, if the Administrator finds that the method of compliance proposed by the applicant provides substantially the same level of airworthiness and that strict compliance with those regulations would impose a severe burden on the applicant. The Administrator may use experience that was satisfactory to an Armed Force of the United States in making such a determination.

(e) The Administrator may require an applicant to comply with special conditions and later requirements than those in paragraphs (c) and (f) of this section, if the Administrator finds that compliance with the listed regulations would not ensure an adequate level of airworthiness for the aircraft.

(f) Except as provided in paragraphs (b) through (e) of this section, an applicant for a type certificate under this section must comply with the appropriate regulations listed in the following table:

Type of aircraft	Date accepted for operational use by the Armed Forces of the United States	Regulations that apply <sup>1</sup>
Small reciprocating-engine powered airplanes .....	Before May 16, 1956 .....	CAR Part 3, as effective May 15, 1956.
	After May 15, 1956 .....	CAR Part 3, or FAR Part 23.
Small turbine engine-powered airplanes .....	Before Oct. 2, 1959 .....	CAR Part 3, as effective Oct. 1, 1959.
	After Oct. 1, 1959 .....	CAR Part 3 or FAR Part 23.
Commuter category airplanes .....	After (Feb. 17, 1987) .....	
	FAR Part 23 as of (Feb. 17, 1987) ..	
Large reciprocating-engine powered airplanes .....	Before Aug. 26, 1955 .....	CAR Part 4b, as effective Aug. 25, 1955.
	After Aug. 25, 1959 .....	CAR Part 4b or FAR Part 25.
Large turbine engine-powered airplanes .....	Before Oct. 2, 1959 .....	CAR Part 4b, as effective Oct. 1, 1959.
	After Oct. 1, 1959 .....	CAR Part 4b or FAR Part 25.
Rotorcraft with maximum certificated takeoff weight of:		
6,000 pounds or less .....	Before Oct. 2, 1959 .....	CAR Part 6, as effective Oct. 1, 1959.
	After Oct. 1, 1959 .....	CAR Part 6, or FAR Part 27.
Over 6,000 pounds .....	Before Oct. 2, 1959 .....	CAR Part 7, as effective Oct. 1, 1959.
	After Oct. 1, 1959 .....	CAR Part 7, or FAR Part 29.

<sup>1</sup> Where no specific date is listed, the applicable regulations are those in effect on the date that the first aircraft of the particular model was accepted for operational use by the Armed Forces.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21–59, 52 FR 1835, Jan. 15, 1987; 52 FR 7262, Mar. 9, 1987]

**§ 21.29 Issue of type certificate: import products.**

(a) A type certificate may be issued for a product that is manufactured in a foreign country with which the United States has an agreement for the acceptance of these products for export and import and that is to be imported into the United States if—

(1) The country in which the product was manufactured certifies that the product has been examined, tested, and found to meet—

(i) The applicable aircraft noise, fuel venting and exhaust emissions requirements of this subchapter as designated in § 21.17, or the applicable aircraft noise, fuel venting and exhaust emissions requirements of the country in which the product was manufactured, and any other requirements the Administrator may prescribe to provide noise, fuel venting and exhaust emission levels no greater than those provided by the applicable aircraft noise, fuel venting, and exhaust emission requirements of this subchapter as designated in § 21.17; and

(ii) The applicable airworthiness requirements of this subchapter as designated in § 21.17, or the applicable airworthiness requirements of the country in which the product was manufactured and any other requirements the Administrator may prescribe to provide a level of safety equivalent to that provided by the applicable airworthiness requirements of this subchapter as designated in § 21.17;

(2) The applicant has submitted the technical data, concerning aircraft noise and airworthiness, respecting the product required by the Administrator; and

(3) The manuals, placards, listings, and instrument markings required by the applicable airworthiness (and noise, where applicable) requirements are presented in the English language.

(b) A product type certificated under this section is considered to be type certificated under the noise standards of part 36, and the fuel venting and exhaust emission standards of part 34, of the Federal Aviation Regulations

where compliance therewith is certified under paragraph (a)(1)(i) of this section, and under the airworthiness standards of that part of the Federal Aviation Regulations with which compliance is certified under paragraph (a)(1)(ii) of this section or to which an equivalent level of safety is certified under paragraph (a)(1)(ii) of this section.

[Amdt. 21–27, 34 FR 18363, Nov. 18, 1969, as amended by Amdt. 21–68, 55 FR 32860, Aug. 10, 1990; 55 FR 37287, Sept. 10, 1990]

**§ 21.31 Type design.**

The type design consists of—

(a) The drawings and specifications, and a listing of those drawings and specifications, necessary to define the configuration and the design features of the product shown to comply with the requirements of that part of this subchapter applicable to the product;

(b) Information on dimensions, materials, and processes necessary to define the structural strength of the product;

(c) The Airworthiness Limitations section of the Instructions for Continued Airworthiness as required by Parts 23, 25, 27, 29, 31, 33, and 35 of this chapter or as otherwise required by the Administrator; and as specified in the applicable airworthiness criteria for special classes of aircraft defined in § 21.17(b); and

(d) For primary category aircraft, if desired, a special inspection and preventive maintenance program designed to be accomplished by an appropriately rated and trained pilot-owner.

(e) Any other data necessary to allow, by comparison, the determination of the airworthiness, noise characteristics, fuel venting, and exhaust emissions (where applicable) of later products of the same type.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21–27, 34 FR 18363, Nov. 18, 1969; Amdt. 21–51, 45 FR 60170, Sept. 11, 1980; Amdt. 21–60, 52 FR 8042, Mar. 13, 1987; Amdt. 21–68, 55 FR 32860, Aug. 10, 1990; Amdt. 21–70, 57 FR 41368, Sept. 9, 1992]

**§ 21.33 Inspection and tests.**

(a) Each applicant must allow the Administrator to make any inspection and any flight and ground test necessary to determine compliance with the applicable requirements of the Federal Aviation Regulations. However, unless otherwise authorized by the Administrator—

(1) No aircraft, aircraft engine, propeller, or part thereof may be presented to the Administrator for test unless compliance with paragraphs (b)(2) through (b)(4) of this section has been shown for that aircraft, aircraft engine, propeller, or part thereof; and

(2) No change may be made to an aircraft, aircraft engine, propeller, or part thereof between the time that compliance with paragraphs (b)(2) through (b)(4) of this section is shown for that aircraft, aircraft engine, propeller, or part thereof and the time that it is presented to the Administrator for test.

(b) Each applicant must make all inspections and tests necessary to determine—

(1) Compliance with the applicable airworthiness, aircraft noise, fuel venting, and exhaust emission requirements;

(2) That materials and products conform to the specifications in the type design;

(3) That parts of the products conform to the drawings in the type design; and

(4) That the manufacturing processes, construction and assembly conform to those specified in the type design.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-17, 32 FR 14926, Oct. 28, 1967; Amdt. 21-27, 34 FR 18363, Nov. 18, 1969; Amdt. 21-44, 41 FR 55463, Dec. 20, 1976; Amdt. 21-68, 55 FR 32860, Aug. 10, 1990; Amdt. 21-68, 55 FR 32860, Aug. 10, 1990]

**§ 21.35 Flight tests.**

(a) Each applicant for an aircraft type certificate (other than under §§ 21.24 through 21.29) must make the tests listed in paragraph (b) of this section. Before making the tests the applicant must show—

(1) Compliance with the applicable structural requirements of this subchapter;

(2) Completion of necessary ground inspections and tests;

(3) That the aircraft conforms with the type design; and

(4) That the Administrator received a flight test report from the applicant (signed, in the case of aircraft to be certificated under Part 25 [New] of this chapter, by the applicant's test pilot) containing the results of his tests.

(b) Upon showing compliance with paragraph (a) of this section, the applicant must make all flight tests that the Administrator finds necessary—

(1) To determine compliance with the applicable requirements of this subchapter; and

(2) For aircraft to be certificated under this subchapter, except gliders and except airplanes of 6,000 lbs. or less maximum certificated weight that are to be certificated under Part 23 of this chapter, to determine whether there is reasonable assurance that the aircraft, its components, and its equipment are reliable and function properly.

(c) Each applicant must, if practicable, make the tests prescribed in paragraph (b)(2) of this section upon the aircraft that was used to show compliance with—

(1) Paragraph (b)(1) of this section; and

(2) For rotorcraft, the rotor drive endurance tests prescribed in § 27.923 or § 29.923 of this chapter, as applicable.

(d) Each applicant must show for each flight test (except in a glider or a manned free balloon) that adequate provision is made for the flight test crew for emergency egress and the use of parachutes.

(e) Except in gliders and manned free balloons, an applicant must discontinue flight tests under this section until he shows that corrective action has been taken, whenever—

(1) The applicant's test pilot is unable or unwilling to make any of the required flight tests; or

(2) Items of noncompliance with requirements are found that may make additional test data meaningless or that would make further testing unduly hazardous.

(f) The flight tests prescribed in paragraph (b)(2) of this section must include—

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(1) For aircraft incorporating turbine engines of a type not previously used in a type certificated aircraft, at least 300 hours of operation with a full complement of engines that conform to a type certificate; and

(2) For all other aircraft, at least 150 hours of operation.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-40, 39 FR 35459, Oct. 1, 1974; Amdt. 21-51, 45 FR 60170, Sept. 11, 1980; Amdt. 21-70, 57 FR 41368, Sept. 9, 1992]

### **§ 21.37 Flight test pilot.**

Each applicant for a normal, utility, acrobatic, commuter, or transport category aircraft type certificate must provide a person holding an appropriate pilot certificate to make the flight tests required by this part.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-59, 52 FR 1835, Jan. 15, 1987]

### **§ 21.39 Flight test instrument calibration and correction report.**

(a) Each applicant for a normal, utility, acrobatic, commuter, or transport category aircraft type certificate must submit a report to the Administrator showing the computations and tests required in connection with the calibration of instruments used for test purposes and in the correction of test results to standard atmospheric conditions.

(b) Each applicant must allow the Administrator to conduct any flight tests that he finds necessary to check the accuracy of the report submitted under paragraph (a) of this section.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-59, 52 FR 1835, Jan. 15, 1987]

### **§ 21.41 Type certificate.**

Each type certificate is considered to include the type design, the operating limitations, the certificate data sheet, the applicable regulations of this subchapter with which the Administrator records compliance, and any other conditions or limitations prescribed for the product in this subchapter.

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### **§ 21.43 Location of manufacturing facilities.**

Except as provided in § 21.29, the Administrator does not issue a type certificate if the manufacturing facilities for the product are located outside of the United States, unless the Administrator finds that the location of the manufacturer's facilities places no undue burden on the FAA in administering applicable airworthiness requirements.

### **§ 21.45 Privileges.**

The holder or licensee of a type certificate for a product may—

(a) In the case of aircraft, upon compliance with §§ 21.173 through 21.189, obtain airworthiness certificates;

(b) In the case of aircraft engines or propellers, obtain approval for installation or certified aircraft;

(c) In the case of any product, upon compliance with §§ 21.133 through 21.163, obtain a production certificate for the type certificated product;

(d) Obtain approval of replacement parts for that product.

### **§ 21.47 Transferability.**

A type certificate may be transferred to or made available to third persons by licensing agreements. Each grantor shall, within 30 days after the transfer of a certificate or execution or termination of a licensing agreement, notify in writing the appropriate Aircraft Certification Office. The notification must state the name and address of the transferee or licensee, date of the transaction, and in the case of a licensing agreement, the extent of authority granted the licensee.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

### **§ 21.49 Availability.**

The holder of a type certificate shall make the certificate available for examination upon the request of the Administrator or the National Transportation Safety Board.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Doc. No. 8084, 32 FR 5769, Apr. 11, 1967]

**§ 21.50 Instructions for continued airworthiness and manufacturer's maintenance manuals having airworthiness limitations sections.**

(a) The holder of a type certificate for a rotorcraft for which a Rotorcraft Maintenance Manual containing an "Airworthiness Limitations" section has been issued under § 27.1529 (a)(2) or § 29.1529 (a)(2) of this chapter, and who obtains approval of changes to any replacement time, inspection interval, or related procedure in that section of the manual, shall make those changes available upon request to any operator of the same type of rotorcraft.

(b) The holder of a design approval, including either the type certificate or supplemental type certificate for an aircraft, aircraft engine, or propeller for which application was made after January 28, 1981, shall furnish at least one set of complete Instructions for Continued Airworthiness, prepared in accordance with §§ 23.1529, 25.1529, 27.1529, 29.1529, 31.82, 33.4, or 35.4 of this chapter, or as specified in the applicable airworthiness criteria for special classes of aircraft defined in § 21.17(b), as applicable, to the owner of each type of aircraft, aircraft engine, or propeller upon its delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later, and thereafter make those instructions available to any other person required by this chapter to comply with any of the terms of these instructions. In addition, changes to the Instructions for Continued Airworthiness shall be made available to any person required by this chapter to comply with any of those instructions.

[Amdt. No. 21-23, 33 FR 14105, Sept. 18, 1968, as amended by Amdt. No 21-51, 45 FR 60170, Sept. 11, 1980; Amdt. 21-60, 52 FR 8042, Mar. 13, 1987]

**§ 21.51 Duration.**

A type certificate is effective until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator.

**§ 21.53 Statement of conformity.**

(a) Each applicant must submit a statement of conformity (FAA Form 317) to the Administrator for each aircraft engine and propeller presented to

the Administrator for type certification. This statement of conformity must include a statement that the aircraft engine or propeller conforms to the type design therefor.

(b) Each applicant must submit a statement of conformity to the Administrator for each aircraft or part thereof presented to the Administrator for tests. This statement of conformity must include a statement that the applicant has complied with § 21.33(a) (unless otherwise authorized under that paragraph).

[Amdt. 21-17, 32 FR 14926, Oct. 28, 1967]

**Subpart C—Provisional Type Certificates**

SOURCE: Docket No. 5085, 29 FR 14566, Oct. 24, 1964, unless otherwise noted.

**§ 21.71 Applicability.**

This subpart prescribes—

(a) Procedural requirements for the issue of provisional type certificates, amendments to provisional type certificates, and provisional amendments to type certificates; and

(b) Rules governing the holders of those certificates.

**§ 21.73 Eligibility.**

(a) Any manufacturer of aircraft manufactured within the United States who is a United States citizen may apply for Class I or Class II provisional type certificates, for amendments to provisional type certificates held by him, and for provisional amendments to type certificates held by him.

(b) Any manufacturer of aircraft manufactured in a foreign country with which the United States has an agreement for the acceptance of those aircraft for export and import may apply for a Class II provisional type certificate, for amendments to provisional type certificates held by him, and for provisional amendments to type certificates held by him.

(c) An aircraft engine manufacturer who is a United States citizen and who has altered a type certificated aircraft by installing different type certificated aircraft engines manufactured by him within the United States may apply for a Class I provisional type certificate

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for the aircraft, and for amendments to Class I provisional type certificates held by him, if the basic aircraft, before alteration, was type certificated in the normal, utility, acrobatic, commuter, or transport category.

[Doc. No. 5085, 29 FR 14566, Oct. 24, 1964, as amended by Amdt. 21-12, 31 FR 13380, Oct. 15, 1966; Amdt. 21-59, 52 FR 1836, Jan. 15, 1987]

### § 21.75 Application.

Applications for provisional type certificates, for amendments thereto, and for provisional amendments to type certificates must be submitted to the Manager of the Aircraft Certification Office for the geographic area in which the applicant is located (or in the case of European, African, Middle East Region, the Manager, Aircraft Engineering Division), and must be accompanied by the pertinent information specified in this subpart.

[Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

### § 21.77 Duration.

(a) Unless sooner surrendered, superseded, revoked, or otherwise terminated, provisional type certificates and amendments thereto are effective for the periods specified in this section.

(b) A Class I provisional type certificate is effective for 24 months after the date of issue.

(c) A Class II provisional type certificate is effective for twelve months after the date of issue.

(d) An amendment to a Class I or Class II provisional type certificate is effective for the duration of the amended certificate.

(e) A provisional amendment to a type certificate is effective for six months after its approval or until the amendment of the type certificate is approved, whichever is first.

[Doc. No. 5085, 29 FR 14566, Oct. 24, 1964 as amended by Amdt. 21-7, 30 FR 14311, Nov. 16, 1965]

### § 21.79 Transferability.

Provisional type certificates are not transferable.

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### § 21.81 Requirements for issue and amendment of Class I provisional type certificates.

(a) An applicant is entitled to the issue or amendment of a Class I provisional type certificate if he shows compliance with this section and the Administrator finds that there is no feature, characteristic, or condition that would make the aircraft unsafe when operated in accordance with the limitations established in paragraph (e) of this section and in § 91.317 of this chapter.

(b) The applicant must apply for the issue of a type or supplemental type certificate for the aircraft.

(c) The applicant must certify that—

(1) The aircraft has been designed and constructed in accordance with the airworthiness requirements applicable to the issue of the type or supplemental type certificate applied for;

(2) The aircraft substantially meets the applicable flight characteristic requirements for the type or supplemental type certificate applied for; and

(3) The aircraft can be operated safely under the appropriate operating limitations specified in paragraph (a) of this section.

(d) The applicant must submit a report showing that the aircraft had been flown in all maneuvers necessary to show compliance with the flight requirements for the issue of the type or supplemental type certificate applied for, and to establish that the aircraft can be operated safely in accordance with the limitations contained in this subchapter.

(e) The applicant must establish all limitations required for the issue of the type or supplemental type certificate applied for, including limitations on weights, speeds, flight maneuvers, loading, and operation of controls and equipment unless, for each limitation not so established, appropriate operating restrictions are established for the aircraft.

(f) The applicant must establish an inspection and maintenance program for the continued airworthiness of the aircraft.

(g) The applicant must show that a prototype aircraft has been flown for at

least 50 hours under an experimental certificate issued under §§ 21.191 through 21.195, or under the auspices of an Armed Force of the United States. However, in the case of an amendment to a provisional type certificate, the Administrator may reduce the number of required flight hours.

[Doc. No. 5085, 29 FR 14566, Oct. 24, 1964, as amended by Amdt. 21-66, 54 FR 34329, Aug. 18, 1989]

**§ 21.83 Requirements for issue and amendment of Class II provisional type certificates.**

(a) An applicant who manufactures aircraft within the United States is entitled to the issue or amendment of a Class II provisional type certificate if he shows compliance with this section and the Administrator finds that there is no feature, characteristic, or condition that would make the aircraft unsafe when operated in accordance with the limitations in paragraph (h) of this section, and §§ 91.317 and 121.207 of this chapter.

(b) An applicant who manufactures aircraft in a country with which the United States has an agreement for the acceptance of those aircraft for export and import is entitled to the issue or amendment of a Class II provisional type certificate if the country in which the aircraft was manufactured certifies that the applicant has shown compliance with this section, that the aircraft meets the requirements of paragraph (f) of this section and that there is no feature, characteristic, or condition that would make the aircraft unsafe when operated in accordance with the limitations in paragraph (h) of this section and §§ 91.317 and 121.207 of this chapter.

(c) The applicant must apply for a type certificate, in the transport category, for the aircraft.

(d) The applicant must hold a U.S. type certificate for at least one other aircraft in the same transport category as the subject aircraft.

(e) The FAA's official flight test program or the flight test program conducted by the authorities of the country in which the aircraft was manufactured, with respect to the issue of a type certificate for that aircraft, must be in progress.

(f) The applicant or, in the case of a foreign manufactured aircraft, the country in which the aircraft was manufactured, must certify that—

(1) The aircraft has been designed and constructed in accordance with the airworthiness requirements applicable to the issue of the type certificate applied for;

(2) The aircraft substantially complies with the applicable flight characteristic requirements for the type certificate applied for; and

(3) The aircraft can be operated safely under the appropriate operating limitations in this subchapter.

(g) The applicant must submit a report showing that the aircraft has been flown in all maneuvers necessary to show compliance with the flight requirements for the issue of the type certificate and to establish that the aircraft can be operated safely in accordance with the limitations in this subchapter.

(h) The applicant must prepare a provisional aircraft flight manual containing all limitations required for the issue of the type certificate applied for, including limitations on weights, speeds, flight maneuvers, loading, and operation of controls and equipment unless, for each limitation not so established, appropriate operating restrictions are established for the aircraft.

(i) The applicant must establish an inspection and maintenance program for the continued airworthiness of the aircraft.

(j) The applicant must show that a prototype aircraft has been flown for at least 100 hours. In the case of an amendment to a provisional type certificate, the Administrator may reduce the number of required flight hours.

[Amdt. 21-12, 31 FR 13386, Oct. 15, 1966, as amended by Amdt. 21-66, 54 FR 34329, Aug. 18, 1989]

**§ 21.85 Provisional amendments to type certificates.**

(a) An applicant who manufactures aircraft within the United States is entitled to a provisional amendment to a type certificate if he shows compliance with this section and the Administrator finds that there is no feature, characteristic, or condition that would

make the aircraft unsafe when operated under the appropriate limitations contained in this subchapter.

(b) An applicant who manufactures aircraft in a foreign country with which the United States has an agreement for the acceptance of those aircraft for export and import is entitled to a provisional amendment to a type certificate if the country in which the aircraft was manufactured certifies that the applicant has shown compliance with this section, that the aircraft meets the requirements of paragraph (e) of this section and that there is no feature, characteristic, or condition that would make the aircraft unsafe when operated under the appropriate limitations contained in this subchapter.

(c) The applicant must apply for an amendment to the type certificate.

(d) The FAA's official flight test program or the flight test program conducted by the authorities of the country in which the aircraft was manufactured, with respect to the amendment of the type certificate, must be in progress.

(e) The applicant or, in the case of foreign manufactured aircraft, the country in which the aircraft was manufactured, must certify that—

(1) The modification involved in the amendment to the type certificate has been designed and constructed in accordance with the airworthiness requirements applicable to the issue of the type certificate for the aircraft;

(2) The aircraft substantially complies with the applicable flight characteristic requirements for the type certificate; and

(3) The aircraft can be operated safely under the appropriate operating limitations in this subchapter.

(f) The applicant must submit a report showing that the aircraft incorporating the modifications involved has been flown in all maneuvers necessary to show compliance with the flight requirements applicable to those modifications and to establish that the aircraft can be operated safely in accordance with the limitations specified in §§91.317 and 121.207 of this chapter.

(g) The applicant must establish and publish, in a provisional aircraft flight manual or other document and on ap-

propriate placards, all limitations required for the issue of the type certificate applied for, including weight, speed, flight maneuvers, loading, and operation of controls and equipment, unless, for each limitation not so established, appropriate operating restrictions are established for the aircraft.

(h) The applicant must establish an inspection and maintenance program for the continued airworthiness of the aircraft.

(i) The applicant must operate a prototype aircraft modified in accordance with the corresponding amendment to the type certificate for the number of hours found necessary by the Administrator.

[Amdt. 21–12, 31 FR 13388, Oct. 15, 1966, as amended by Amdt. 21–66, 54 FR 34329, Aug. 18, 1989]

## Subpart D—Changes to Type Certificates

SOURCE: Docket No. 5085, 29 FR 14567, Oct. 24, 1964, unless otherwise noted.

### §21.91 Applicability.

This subpart prescribes procedural requirements for the approval of changes to type certificates.

### §21.93 Classification of changes in type design.

(a) In addition to changes in type design specified in paragraph (b) of this section, changes in type design are classified as minor and major. A “minor change” is one that has no appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product. All other changes are “major changes” (except as provided in paragraph (b) of this section).

(b) For the purpose of complying with Part 36 of this chapter, and except as provided in paragraphs (b)(2), (b)(3), and (b)(4) of this section, any voluntary change in the type design of an aircraft that may increase the noise levels of that aircraft is an “acoustical change” (in addition to being a minor or major change as classified in paragraph (a) of this section) for the following aircraft:



(1) Transport category large airplanes.

(2) Jet (Turbojet powered) airplanes (regardless of category). For airplanes to which this paragraph applies, “acoustical changes” do not include changes in type design that are limited to one of the following—

(i) Gear down flight with one or more retractable landing gear down during the entire flight, or

(ii) Spare engine and nacelle carriage external to the skin of the airplane (and return of the pylon or other external mount), or

(iii) Time-limited engine and/or nacelle changes, where the change in type design specifies that the airplane may not be operated for a period of more than 90 days unless compliance with the applicable acoustical change provisions of Part 36 of this chapter is shown for that change in type design.

(3) Propeller driven commuter category and small airplanes in the primary, normal, utility, acrobatic, transport, and restricted categories, except for airplanes that are:

(i) Designated for “agricultural aircraft operations” (as defined in §137.3 of this chapter, effective January 1, 1966) to which §36.1583 of this chapter does not apply, or

(ii) Designated for dispensing fire fighting materials to which §36.1583 of this chapter does not apply, or

(iii) U.S. registered, and that had flight time prior to January 1, 1955 or

(iv) Land configured aircraft reconfigured with floats or skis. This reconfiguration does not permit further exception from the requirements of this section upon any acoustical change not enumerated in §21.93(b).

(4) Helicopters except:

(i) Those helicopters that are designated exclusively:

(A) For “agricultural aircraft operations”, as defined in §137.3 of this chapter, as effective on January 1, 1966;

(B) For dispensing fire fighting materials; or

(C) For carrying external loads, as defined in §133.1(b) of this chapter, as effective on December 20, 1976.

(ii) Those helicopters modified by installation or removal of external equipment. For purposes of this paragraph, “external equipment” means any in-

strument, mechanism, part, apparatus, appurtenance, or accessory that is attached to, or extends from, the helicopter exterior but is not used nor is intended to be used in operating or controlling a helicopter in flight and is not part of an airframe or engine. An “acoustical change” does not include:

(A) Addition or removal of external equipment;

(B) Changes in the airframe made to accommodate the addition or removal of external equipment, to provide for an external load attaching means, to facilitate the use of external equipment or external loads, or to facilitate the safe operation of the helicopter with external equipment mounted to, or external loads carried by, the helicopter;

(C) Reconfiguration of the helicopter by the addition or removal of floats and skis;

(D) Flight with one or more doors and/or windows removed or in an open position; or

(E) Any changes in the operational limitations placed on the helicopter as a consequence of the addition or removal of external equipment, floats, and skis, or flight operations with doors and/or windows removed or in an open position.

(c) For purposes of complying with part 34 of this chapter, any voluntary change in the type design of the airplane or engine which may increase fuel venting or exhaust emissions is an “emissions change.”

[Amdt. 21-27, 34 FR 18363, Nov. 18, 1969, as amended by Amdt. 21-42, 40 FR 1033, Jan. 6, 1975; Amdt. 21-47, 43 FR 28419, June 29, 1978; Amdt. 21-56, 47 FR 758, Jan. 7, 1982; Amdt. 21-61, 53 FR 3539, Feb. 5, 1988; Amdt. 21-62, 53 FR 16365, May 6, 1988; Amdt. 21-63, 53 FR 47399, Nov. 22, 1988; Amdt. 21-68, 55 FR 32860, Aug. 10, 1990; Amdt. 21-70, 57 FR 41368, Sept. 9, 1992; Amdt. 21-73, 61 FR 20699, May 7, 1996; 61 FR 57002, Nov. 5, 1996; Amdt. 21-81, 67 FR 45211, July 8, 2002]

#### § 21.95 Approval of minor changes in type design.

Minor changes in a type design may be approved under a method acceptable to the Administrator before submitting to the Administrator any substantiating or descriptive data.

**§ 21.97 Approval of major changes in type design.**

(a) In the case of a major change in type design, the applicant must submit substantiating data and necessary descriptive data for inclusion in the type design.

(b) Approval of a major change in the type design of an aircraft engine is limited to the specific engine configuration upon which the change is made unless the applicant identifies in the necessary descriptive data for inclusion in the type design the other configurations of the same engine type for which approval is requested and shows that the change is compatible with the other configurations.

[Amdt. 21–40, 39 FR 35459, Oct. 1, 1974]

**§ 21.99 Required design changes.**

(a) When an Airworthiness Directive is issued under Part 39 the holder of the type certificate for the product concerned must—

(1) If the Administrator finds that design changes are necessary to correct the unsafe condition of the product, and upon his request, submit appropriate design changes for approval; and

(2) Upon approval of the design changes, make available the descriptive data covering the changes to all operators of products previously certificated under the type certificate.

(b) In a case where there are no current unsafe conditions, but the Administrator or the holder of the type certificate finds through service experience that changes in type design will contribute to the safety of the product, the holder of the type certificate may submit appropriate design changes for approval. Upon approval of the changes, the manufacturer shall make information on the design changes available to all operators of the same type of product.

[Doc. No. 5085, 29 FR 14567, Oct. 24, 1964, as amended by Amdt. 21–3, 30 FR 8826, July 24, 1965]

**§ 21.101 Designation of applicable regulations.**

(a) An applicant for a change to a type certificate must show that the changed product complies with the airworthiness requirements applicable to

the category of the product in effect on the date of the application for the change and with parts 34 and 36 of this chapter. Exceptions are detailed in paragraphs (b) and (c) of this section.

(b) If paragraphs (b)(1), (2), or (3) of this section apply, an applicant may show that the changed product complies with an earlier amendment of a regulation required by paragraph (a) of this section, and of any other regulation the Administrator finds is directly related. However, the earlier amended regulation may not precede either the corresponding regulation incorporated by reference in the type certificate, or any regulation in §§ 23.2, 25.2, 27.2, or 29.2 of this chapter that is related to the change. The applicant may show compliance with an earlier amendment of a regulation for any of the following:

(1) A change that the Administrator finds not to be significant. In determining whether a specific change is significant, the Administrator considers the change in context with all previous relevant design changes and all related revisions to the applicable regulations incorporated in the type certificate for the product. Changes that meet one of the following criteria are automatically considered significant:

(i) The general configuration or the principles of construction are not retained.

(ii) The assumptions used for certification of the product to be changed do not remain valid.

(2) Each area, system, component, equipment, or appliance that the Administrator finds is not affected by the change.

(3) Each area, system, component, equipment, or appliance that is affected by the change, for which the Administrator finds that compliance with a regulation described in paragraph (a) of this section would not contribute materially to the level of safety of the changed product or would be impractical.

(c) An applicant for a change to an aircraft (other than a rotorcraft) of 6,000 pounds or less maximum weight, or to a non-turbine rotorcraft of 3,000 pounds or less maximum weight may show that the changed product complies with the regulations incorporated

by reference in the type certificate. However, if the Administrator finds that the change is significant in an area, the Administrator may designate compliance with an amendment to the regulation incorporated by reference in the type certificate that applies to the change and any regulation that the Administrator finds is directly related, unless the Administrator also finds that compliance with that amendment or regulation would not contribute materially to the level of safety of the changed product or would be impractical.

(d) If the Administrator finds that the regulations in effect on the date of the application for the change do not provide adequate standards with respect to the proposed change because of a novel or unusual design feature, the applicant must also comply with special conditions, and amendments to those special conditions, prescribed under the provisions of § 21.16, to provide a level of safety equal to that established by the regulations in effect on the date of the application for the change.

(e) An application for a change to a type certificate for a transport category aircraft is effective for 5 years, and an application for a change to any other type certificate is effective for 3 years. If the change has not been approved, or if it is clear that it will not be approved under the time limit established under this paragraph, the applicant may do either of the following:

(1) File a new application for a change to the type certificate and comply with all the provisions of paragraph (a) of this section applicable to an original application for a change.

(2) File for an extension of the original application and comply with the provisions of paragraph (a) of this section. The applicant must then select a new application date. The new application date may not precede the date the change is approved by more than the time period established under this paragraph (e).

(f) For aircraft certificated under §§ 21.17(b), 21.24, 21.25, and 21.27 the airworthiness requirements applicable to the category of the product in effect on the date of the application for the change include each airworthiness re-

quirement that the Administrator finds to be appropriate for the type certification of the aircraft in accordance with those sections.

[Doc. No. 28903, 65 FR 36266, June 7, 2000]

### Subpart E—Supplemental Type Certificates

SOURCE: Docket No. 5085, 29 FR 14568, Oct. 24, 1964, unless otherwise noted.

#### § 21.111 Applicability.

This subpart prescribes procedural requirements for the issue of supplemental type certificates.

#### § 21.113 Requirement of supplemental type certificate.

Any person who alters a product by introducing a major change in type design, not great enough to require a new application for a type certificate under § 21.19, shall apply to the Administrator for a supplemental type certificate, except that the holder of a type certificate for the product may apply for amendment of the original type certificate. The application must be made in a form and manner prescribed by the Administrator.

#### § 21.115 Applicable requirements.

(a) Each applicant for a supplemental type certificate must show that the altered product meets applicable requirements specified in § 21.101 and, in the case of an acoustical change described in § 21.93(b), show compliance with the applicable noise requirements of part 36 of this chapter and, in the case of an emissions change described in § 21.93(c), show compliance with the applicable fuel venting and exhaust emissions requirements of part 34 of this chapter.

(b) Each applicant for a supplemental type certificate must meet §§ 21.33 and 21.53 with respect to each change in the type design.

[Amdt. 21-17, 32 FR 14927, Oct. 28, 1967, as amended by Amdt. 21-42, 40 FR 1033, Jan. 6, 1975; Amdt. 21-52A, 45 FR 79009, Nov. 28, 1980; Amdt. 21-61, 53 FR 3540, Feb. 5, 1988; Amdt. 21-68, 55 FR 32860, Aug. 10, 1990; Amdt. 21-71, 57 FR 42854, Sept. 16, 1992; Amdt. 21-77, 65 FR 36266, June 7, 2000]

**§ 21.117****§ 21.117 Issue of supplemental type certificates.**

(a) An applicant is entitled to a supplemental type certificate if he meets the requirements of §§ 21.113 and 21.115.

(b) A supplemental type certificate consists of—

(1) The approval by the Administrator of a change in the type design of the product; and

(2) The type certificate previously issued for the product.

**§ 21.119 Privileges.**

The holder of a supplemental type certificate may—

(a) In the case of aircraft, obtain airworthiness certificates;

(b) In the case of other products, obtain approval for installation on certificated aircraft; and

(c) Obtain a production certificate for the change in the type design that was approved by that supplemental type certificate.

**Subpart F—Production Under Type Certificate Only**

SOURCE: Docket No. 5085, 29 FR 14568, Oct. 24, 1964, unless otherwise noted.

**§ 21.121 Applicability.**

This subpart prescribes rules for production under a type certificate only.

**§ 21.123 Production under type certificate.**

Each manufacturer of a product being manufactured under a type certificate only shall—

(a) Make each product available for inspection by the Administrator;

(b) Maintain at the place of manufacture the technical data and drawings necessary for the Administrator to determine whether the product and its parts conform to the type design;

(c) Except as otherwise authorized by the Aircraft Certification Directorate Manager for the geographic area which the manufacturer is located, for products manufactured more than 6 months after the date of issue of the type certificate, establish and maintain an approved production inspection system that insures that each product con-

forms to the type design and is in condition for safe operation; and

(d) Upon the establishment of the approved production inspection system (as required by paragraph (c) of this section) submit to the Administrator a manual that describes that system and the means for making the determinations required by § 21.125(b).

[Doc. No. 5085, 29 FR 14568, Oct. 24, 1964, as amended by Amdt. 21–34, 35 FR 13008, Aug. 15, 1970; Amdt. 21–51, 45 FR 60170, Sept. 11, 1980; Amdt. 21–67, 54 FR 39291, Sept. 25, 1989]

**§ 21.125 Production inspection system: Materials Review Board.**

(a) Each manufacturer required to establish a production inspection system by § 21.123(c) shall—

(1) Establish a Materials Review Board (to include representatives from the inspection and engineering departments) and materials review procedures; and

(2) Maintain complete records of Materials Review Board action for at least two years.

(b) The production inspection system required in § 21.123(c) must provide a means for determining at least the following:

(1) Incoming materials, and bought or subcontracted parts, used in the finished product must be as specified in the type design data, or must be suitable equivalents.

(2) Incoming materials, and bought or subcontracted parts, must be properly identified if their physical or chemical properties cannot be readily and accurately determined.

(3) Materials subject to damage and deterioration must be suitably stored and adequately protected.

(4) Processes affecting the quality and safety of the finished product must be accomplished in accordance with acceptable industry or United States specifications.

(5) Parts and components in process must be inspected for conformity with the type design data at points in production where accurate determinations can be made.

(6) Current design drawings must be readily available to manufacturing and inspection personnel, and used when necessary.

(7) Design changes, including material substitutions, must be controlled and approved before being incorporated in the finished product.

(8) Rejected materials and parts must be segregated and identified in a manner that precludes installation in the finished product.

(9) Materials and parts that are withheld because of departures from design data or specifications, and that are to be considered for installation in the finished product, must be processed through the Materials Review Board. Those materials and parts determined by the Board to be serviceable must be properly identified and reinspected if rework or repair is necessary. Materials and parts rejected by the Board must be marked and disposed of to ensure that they are not incorporated in the final product.

(10) Inspection records must be maintained, identified with the completed product where practicable, and retained by the manufacturer for at least two years.

#### § 21.127 Tests: aircraft.

(a) Each person manufacturing aircraft under a type certificate only shall establish an approved production flight test procedure and flight check-off form, and in accordance with that form, flight test each aircraft produced.

(b) Each production flight test procedure must include the following:

(1) An operational check of the trim, controllability, or other flight characteristics to establish that the production aircraft has the same range and degree of control as the prototype aircraft.

(2) An operational check of each part or system operated by the crew while in flight to establish that, during flight, instrument readings are within normal range.

(3) A determination that all instruments are properly marked, and that all placards and required flight manuals are installed after flight test.

(4) A check of the operational characteristics of the aircraft on the ground.

(5) A check on any other items peculiar to the aircraft being tested that can best be done during the ground or flight operation of the aircraft.

#### § 21.128 Tests: aircraft engines.

(a) Each person manufacturing aircraft engines under a type certificate only shall subject each engine (except rocket engines for which the manufacturer must establish a sampling technique) to an acceptable test run that includes the following:

(1) Break-in runs that include a determination of fuel and oil consumption and a determination of power characteristics at rated maximum continuous power or thrust and, if applicable, at rated takeoff power or thrust.

(2) At least five hours of operation at rated maximum continuous power or thrust. For engines having a rated takeoff power or thrust higher than rated maximum continuous power or thrust, the five-hour run must include 30 minutes at rated takeoff power or thrust.

(b) The test runs required by paragraph (a) of this section may be made with the engine appropriately mounted and using current types of power and thrust measuring equipment.

[Doc. No. 5085, 29 FR 14568, Oct. 24, 1964, as amended by Amdt. 21-5, 32 FR 3735, Mar. 4, 1967]

#### § 21.129 Tests: propellers.

Each person manufacturing propellers under a type certificate only shall give each variable pitch propeller an acceptable functional test to determine if it operates properly throughout the normal range of operation.

#### § 21.130 Statement of conformity.

Each holder or licensee of a type certificate only, for a product manufactured in the United States, shall, upon the initial transfer by him of the ownership of such product manufactured under that type certificate, or upon application for the original issue of an aircraft airworthiness certificate or an aircraft engine or propeller airworthiness approval tag (FAA Form 8130-3), give the Administrator a statement of conformity (FAA Form 317). This statement must be signed by an authorized person who holds a responsible position in the manufacturing organization, and must include—

(a) For each product, a statement that the product conforms to its type

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certificate and is in condition for safe operation;

(b) For each aircraft, a statement that the aircraft has been flight checked; and

(c) For each aircraft engine or variable pitch propeller, a statement that the engine or propeller has been subjected by the manufacturer to a final operational check.

However, in the case of a product manufactured for an Armed Force of the United States, a statement of conformity is not required if the product has been accepted by that Armed Force.

[Amdt. 21-25, 34 FR 14068, Sept. 5, 1969]

### Subpart G—Production Certificates

SOURCE: Docket No. 5085, 29 FR 14569, Oct. 24, 1964, unless otherwise noted.

#### § 21.131 Applicability.

This subpart prescribes procedural requirements for the issue of production certificates and rules governing the holders of those certificates.

#### § 21.133 Eligibility.

(a) Any person may apply for a production certificate if he holds, for the product concerned, a—

(1) Current type certificate;

(2) Right to the benefits of that type certificate under a licensing agreement; or

(3) Supplemental type certificate.

(b) Each application for a production certificate must be made in a form and manner prescribed by the Administrator.

#### § 21.135 Requirements for issuance.

An applicant is entitled to a production certificate if the Administrator finds, after examination of the supporting data and after inspection of the organization and production facilities, that the applicant has complied with §§ 21.139 and 21.143.

#### § 21.137 Location of manufacturing facilities.

The Administrator does not issue a production certificate if the manufacturing facilities concerned are located

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outside the United States, unless the Administrator finds no undue burden on the United States in administering the applicable requirements of the Federal Aviation Act of 1958 or of the Federal Aviation Regulations.

#### § 21.139 Quality control.

The applicant must show that he has established and can maintain a quality control system for any product, for which he requests a production certificate, so that each article will meet the design provisions of the pertinent type certificate.

#### § 21.143 Quality control data requirements; prime manufacturer.

(a) Each applicant must submit, for approval, data describing the inspection and test procedures necessary to ensure that each article produced conforms to the type design and is in a condition for safe operation, including as applicable—

(1) A statement describing assigned responsibilities and delegated authority of the quality control organization, together with a chart indicating the functional relationship of the quality control organization to management and to other organizational components, and indicating the chain of authority and responsibility within the quality control organization;

(2) A description of inspection procedures for raw materials, purchased items, and parts and assemblies produced by manufacturers' suppliers including methods used to ensure acceptable quality of parts and assemblies that cannot be completely inspected for conformity and quality when delivered to the prime manufacturer's plant;

(3) A description of the methods used for production inspection of individual parts and complete assemblies, including the identification of any special manufacturing processes involved, the means used to control the processes, the final test procedure for the complete product, and, in the case of aircraft, a copy of the manufacturer's production flight test procedures and checkoff list;

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(4) An outline of the materials review system, including the procedure for recording review board decisions and disposing of rejected parts;

(5) An outline of a system for informing company inspectors of current changes in engineering drawings, specifications, and quality control procedures; and

(6) A list or chart showing the location and type of inspection stations.

(b) Each prime manufacturer shall make available to the Administrator information regarding all delegation of authority to suppliers to make major inspections of parts or assemblies for which the prime manufacturer is responsible.

[Doc. No. 5085, 29 FR 14569, Oct. 24, 1964, as amended by Amdt. 21-51, 45 FR 60170, Sept. 11, 1980]

### § 21.147 Changes in quality control system.

After the issue of a production certificate, each change to the quality control system is subject to review by the Administrator. The holder of a production certificate shall immediately notify the Administrator, in writing of any change that may affect the inspection, conformity, or airworthiness of the product.

### § 21.149 Multiple products.

The Administrator may authorize more than one type certificated product to be manufactured under the terms of one production certificate, if the products have similar production characteristics.

### § 21.151 Production limitation record.

A production limitation record is issued as part of a production certificate. The record lists the type certificate of every product that the applicant is authorized to manufacture under the terms of the production certificate.

### § 21.153 Amendment of the production certificates.

The holder of a production certificate desiring to amend it to add a type certificate or model, or both, must apply therefor in a form and manner prescribed by the Administrator. The applicant must comply with the applica-

ble requirements of §§ 21.139, 21.143, and 21.147.

### § 21.155 Transferability.

A production certificate is not transferable.

### § 21.157 Inspections and tests.

Each holder of a production certificate shall allow the Administrator to make any inspections and tests necessary to determine compliance with the applicable regulations in this subchapter.

### § 21.159 Duration.

A production certificate is effective until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, or the location of the manufacturing facility is changed.

### § 21.161 Display.

The holder of a production certificate shall display it prominently in the main office of the factory in which the product concerned is manufactured.

### § 21.163 Privileges.

(a) The holder of a production certificate may—

(1) Obtain an aircraft airworthiness certificate without further showing, except that the Administrator may inspect the aircraft for conformity with the type design; or

(2) In the case of other products, obtain approval for installation on type certificated aircraft.

(b) Notwithstanding the provisions of § 147.3 of this chapter, the holder of a production certificate for a primary category aircraft, or for a normal, utility, or acrobatic category aircraft of a type design that is eligible for a special airworthiness certificate in the primary category under § 21.184(c), may—

(1) Conduct training for persons in the performance of a special inspection and preventive maintenance program approved as a part of the aircraft's type design under § 21.24(b), provided the training is given by a person holding a mechanic certificate with appropriate airframe and powerplant ratings issued under part 65 of this chapter; and

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(2) Issue a certificate of competency to persons successfully completing the approved training program, provided the certificate specifies the aircraft make and model to which the certificate applies.

[Doc. No. 23345, 57 FR 41368, Sept. 9, 1992]

### § 21.165 Responsibility of holder.

The holder of a production certificate shall—

(a) Maintain the quality control system in conformity with the data and procedures approved for the production certificate; and

(b) Determine that each part and each completed product, including primary category aircraft assembled under a production certificate by another person from a kit provided by the holder of the production certificate, submitted for airworthiness certification or approval conforms to the approved design and is in a condition for safe operation.

[Doc. No. 5085, 29 FR 14569, Oct. 24, 1964, as amended by Amdt. 21-64, 53 FR 48521, Dec. 1, 1988; Amdt. 21-70, 57 FR 41368, Sept. 9, 1992]

## Subpart H—Airworthiness Certificates

SOURCE: Docket No. 5085, 29 FR 14569, Oct. 24, 1964, unless otherwise noted.

### § 21.171 Applicability.

This subpart prescribes procedural requirements for the issue of airworthiness certificates.

### § 21.173 Eligibility.

Any registered owner of a U.S.-registered aircraft (or the agent of the owner) may apply for an airworthiness certificate for that aircraft. An application for an airworthiness certificate must be made in a form and manner acceptable to the Administrator, and may be submitted to any FAA office.

[Amdt. 21-26, 34 FR 15244, Sept. 30, 1969]

### § 21.175 Airworthiness certificates: classification.

(a) Standard airworthiness certificates are airworthiness certificates issued for aircraft type certificated in the normal, utility, acrobatic, com-

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muter, or transport category, and for manned free balloons, and for aircraft designated by the Administrator as special classes of aircraft.

(b) Special airworthiness certificates are primary, restricted, limited, and provisional airworthiness certificates, special flight permits, and experimental certificates.

[Amdt. 21-21, 33 FR 6858, May 7, 1968, as amended by Amdt. 21-60, 52 FR 8043, Mar. 13, 1987; Amdt. 21-70, 57 FR 41368, Sept. 9, 1992]

### § 21.177 Amendment or modification.

An airworthiness certificate may be amended or modified only upon application to the Administrator.

### § 21.179 Transferability.

An airworthiness certificate is transferred with the aircraft.

### § 21.181 Duration.

(a) Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, airworthiness certificates are effective as follows:

(1) Standard airworthiness certificates, special airworthiness certificates—primary category, and airworthiness certificates issued for restricted or limited category aircraft are effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with Parts 43 and 91 of this chapter and the aircraft are registered in the United States.

(2) A special flight permit is effective for the period of time specified in the permit.

(3) An experimental certificate for research and development, showing compliance with regulations, crew training, or market surveys is effective for one year after the date of issue or renewal unless a shorter period is prescribed by the Administrator. The duration of amateur-built, exhibition, and air-racing experimental certificates will be unlimited unless the Administrator finds for good cause that a specific period should be established.

(b) The owner, operator, or bailee of the aircraft shall, upon request, make it available for inspection by the Administrator.



(c) Upon suspension, revocation, or termination by order of the Administrator of an airworthiness certificate, the owner, operator, or bailee of an aircraft shall, upon request, surrender the certificate to the Administrator.

[Amdt. 21-21, 33 FR 6858, May 7, 1968, as amended by Amdt. 21-49, 44 FR 46781, Aug. 9, 1979; Amdt. 21-70, 57 FR 41368, Sept. 9, 1992]

#### § 21.182 Aircraft identification.

(a) Except as provided in paragraph (b) of this section, each applicant for an airworthiness certificate under this subpart must show that his aircraft is identified as prescribed in § 45.11.

(b) Paragraph (a) of this section does not apply to applicants for the following:

(1) A special flight permit.

(2) An experimental certificate for an aircraft that is not amateur-built or kit-built.

(3) A change from one airworthiness classification to another, for an aircraft already identified as prescribed in § 45.11.

[Amdt. 21-13, 32 FR 188, Jan. 10, 1967, as amended by Amdt. 21-51, 45 FR 60170, Sept. 11, 1980; Amdt. 21-70, 57 FR 41368, Sept. 9, 1992]

#### § 21.183 Issue of standard airworthiness certificates for normal, utility, acrobatic, commuter, and transport category aircraft; manned free balloons; and special classes of aircraft.

(a) *New aircraft manufactured under a production certificate.* An applicant for a standard airworthiness certificate for a new aircraft manufactured under a production certificate is entitled to a standard airworthiness certificate without further showing, except that the Administrator may inspect the aircraft to determine conformity to the type design and condition for safe operation.

(b) *New aircraft manufactured under type certificate only.* An applicant for a standard airworthiness certificate for a new aircraft manufactured under a type certificate only is entitled to a standard airworthiness certificate upon presentation, by the holder or licensee of the type certificate, of the statement of conformity prescribed in § 21.130 if the Administrator finds after

inspection that the aircraft conforms to the type design and is in condition for safe operation.

(c) *Import aircraft.* An applicant for a standard airworthiness certificate for an import aircraft type certificated in accordance with § 21.29 is entitled to an airworthiness certificate if the country in which the aircraft was manufactured certifies, and the Administrator finds, that the aircraft conforms to the type design and is in condition for safe operation.

(d) *Other aircraft.* An applicant for a standard airworthiness certificate for aircraft not covered by paragraphs (a) through (c) of this section is entitled to a standard airworthiness certificate if—

(1) He presents evidence to the Administrator that the aircraft conforms to a type design approved under a type certificate or a supplemental type certificate and to applicable Airworthiness Directives;

(2) The aircraft (except an experimentally certificated aircraft that previously had been issued a different airworthiness certificate under this section) has been inspected in accordance with the performance rules for 100-hour inspections set forth in § 43.15 of this chapter and found airworthy by—

(i) The manufacturer;

(ii) The holder of a repair station certificate as provided in Part 145 of this chapter;

(iii) The holder of a mechanic certificate as authorized in Part 65 of this chapter; or

(iv) The holder of a certificate issued under Part 121 of this chapter, and having a maintenance and inspection organization appropriate to the aircraft type; and

(3) The Administrator finds after inspection, that the aircraft conforms to the type design, and is in condition for safe operation.

(e) *Noise requirements.* Notwithstanding all other provisions of this section, the following must be complied with for the original issuance of a standard airworthiness certificate:

(1) For transport category large airplanes and jet (turbojet powered) airplanes that have not had any flight time before the dates specified in

§ 36.1(d), no standard airworthiness certificate is originally issued under this section unless the Administrator finds that the type design complies with the noise requirements in § 36.1(d) in addition to the applicable airworthiness requirements in this section. For import airplanes, compliance with this paragraph is shown if the country in which the airplane was manufactured certifies, and the Administrator finds, that § 36.1(d) (or the applicable airplane noise requirements of the country in which the airplane was manufactured and any other requirements the Administrator may prescribe to provide noise levels no greater than those provided by compliance with § 36.1(d)) and paragraph (c) of this section are complied with.

(2) For normal, utility, acrobatic, commuter, or transport category propeller driven small airplanes (except for those airplanes that are designed for “agricultural aircraft operations” (as defined in § 137.3 of this chapter, as effective on January 1, 1966) or for dispensing fire fighting materials to which § 36.1583 of this chapter does not apply) that have not had any flight time before the applicable date specified in Part 36 of this chapter, no standard airworthiness certificate is originally issued under this section unless the applicant shows that the type design complies with the applicable noise requirements of Part 36 of this chapter in addition to the applicable airworthiness requirements in this section. For import airplanes, compliance with this paragraph is shown if the country in which the airplane was manufactured certifies, and the Administrator finds, that the applicable requirements of Part 36 of this chapter (or the applicable airplane noise requirements of the country in which the airplane was manufactured and any other requirements the Administrator may prescribe to provide noise levels no greater than those provided by compliance with the applicable requirements of Part 36 of this chapter) and paragraph (c) of this section are complied with.

(f) *Passenger emergency exit requirements.* Notwithstanding all other provisions of this section, each applicant for issuance of a standard airworthiness

certificate for a transport category airplane manufactured after October 16, 1987, must show that the airplane meets the requirements of § 25.807(c)(7) in effect on July 24, 1989. For the purposes of this paragraph, the date of manufacture of an airplane is the date the inspection acceptance records reflect that the airplane is complete and meets the FAA-approved type design data.

(g) *Fuel venting and exhaust emission requirements.* Notwithstanding all other provisions of this section, and irrespective of the date of application, no airworthiness certificate is issued, on and after the dates specified in part 34 for the airplanes specified therein, unless the airplane complies with the applicable requirements of that part.

[Amdt. 21–17, 32 FR 14927, Oct. 28, 1967, as amended by Amdt. 21–20, 33 FR 3055, Feb. 16, 1968; Amdt. 21–25, 34 FR 14068, Sept. 5, 1969; Amdt. 21–42, 40 FR 1033, Jan. 6, 1975; Amdt. 21–47, 43 FR 28419, June 29, 1978; Amdt. 21–52, 45 FR 67066, Oct. 9, 1980; Amdt. 21–59, 52 FR 1836, Jan. 15, 1987; Amdt. 21–60, 52 FR 8043, Mar. 13, 1987; Amdt. 21–65, 54 FR 26695, June 23, 1989; Amdt. 21–68, 55 FR 32860, Aug. 10, 1990; Amdt. 21–79, 66 FR 21065, Apr. 27, 2001; Amdt. 21–81, 67 FR 45211, July 8, 2002]

**§ 21.184 Issue of special airworthiness certificates for primary category aircraft.**

(a) *New primary category aircraft manufactured under a production certificate.* An applicant for an original, special airworthiness certificate—primary category for a new aircraft that meets the criteria of § 21.24(a)(1), manufactured under a production certificate, including aircraft assembled by another person from a kit provided by the holder of the production certificate and under the supervision and quality control of that holder, is entitled to a special airworthiness certificate without further showing, except that the Administrator may inspect the aircraft to determine conformity to the type design and condition for safe operation.

(b) *Imported aircraft.* An applicant for a special airworthiness certificate—primary category for an imported aircraft type certificated under § 21.29 is entitled to a special airworthiness certificate if the civil airworthiness authority of the country in which the aircraft was manufactured certifies, and the

Administrator finds after inspection, that the aircraft conforms to an approved type design that meets the criteria of § 21.24(a)(1) and is in a condition for safe operation.

(c) *Aircraft having a current standard airworthiness certificate.* An applicant for a special airworthiness certificate—primary category, for an aircraft having a current standard airworthiness certificate that meets the criteria of § 21.24(a)(1), may obtain the primary category certificate in exchange for its standard airworthiness certificate through the supplemental type certification process. For the purposes of this paragraph, a current standard airworthiness certificate means that the aircraft conforms to its approved normal, utility, or acrobatic type design, complies with all applicable airworthiness directives, has been inspected and found airworthy within the last 12 calendar months in accordance with § 91.409(a)(1) of this chapter, and is found to be in a condition for safe operation by the Administrator.

(d) *Other aircraft.* An applicant for a special airworthiness certificate—primary category for an aircraft that meets the criteria of § 21.24(a)(1), and is not covered by paragraph (a), (b), or (c) of this section, is entitled to a special airworthiness certificate if—

(1) The applicant presents evidence to the Administrator that the aircraft conforms to an approved primary, normal, utility, or acrobatic type design, including compliance with all applicable airworthiness directives;

(2) The aircraft has been inspected and found airworthy within the past 12 calendar months in accordance with § 91.409(a)(1) of this chapter and;

(3) The aircraft is found by the Administrator to conform to an approved type design and to be in a condition for safe operation.

(e) *Multiple-category airworthiness certificates* in the primary category and any other category will not be issued; a primary category aircraft may hold only one airworthiness certificate.

[Doc. No. 23345, 57 FR 41368, Sept. 9, 1992, as amended by Amdt. 21-70, 57 FR 43776, Sept. 22, 1992]

#### **§ 21.185 Issue of airworthiness certificates for restricted category aircraft.**

(a) *Aircraft manufactured under a production certificate or type certificate only.* An applicant for the original issue of a restricted category airworthiness certificate for an aircraft type certificated in the restricted category, that was not previously type certificated in any other category, must comply with the appropriate provisions of § 21.183.

(b) *Other aircraft.* An applicant for a restricted category airworthiness certificate for an aircraft type certificated in the restricted category, that was either a surplus aircraft of the Armed Forces or previously type certificated in another category, is entitled to an airworthiness certificate if the aircraft has been inspected by the Administrator and found by him to be in a good state of preservation and repair and in a condition for safe operation.

(c) *Import aircraft.* An applicant for the original issue of a restricted category airworthiness certificate for an import aircraft type certificated in the restricted category only in accordance with § 21.29 is entitled to an airworthiness certificate if the country in which the aircraft was manufactured certifies, and the Administrator finds, that the aircraft conforms to the type design and is in a condition for safe operation.

(d) *Noise requirements.* For propeller-driven small airplanes (except airplanes designed for “agricultural aircraft operations,” as defined in § 137.3 of this chapter, as effective on January 1, 1966, or for dispensing fire fighting materials) that have not had any flight time before the applicable date specified in Part 36 of this chapter, and notwithstanding the other provisions of this section, no original restricted category airworthiness certificate is issued under this section unless the Administrator finds that the type design complies with the applicable noise requirements of Part 36 of this chapter in addition to the applicable airworthiness requirements of this section. For import airplanes, compliance with this paragraph is shown if the country in which the airplane was manufactured certifies, and the Administrator finds, that the applicable requirements of

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Part 36 of this chapter (or the applicable airplane noise requirements of the country in which the airplane was manufactured and any other requirements the Administrator may prescribe to provide noise levels no greater than those provided by compliance with the applicable requirements of Part 36 of this chapter) and paragraph (c) of this section are complied with.

[Amdt. 21–10, 31 FR 9211, July 6, 1966; as amended by Amdt. 21–32, 35 FR 10202, June 23, 1970; Amdt. 21–42, 40 FR 1034, Jan. 6, 1975]

### § 21.187 Issue of multiple airworthiness certification.

(a) An applicant for an airworthiness certificate in the restricted category, and in one or more other categories except primary category, is entitled to the certificate, if—

(1) He shows compliance with the requirements for each category, when the aircraft is in the configuration for that category; and

(2) He shows that the aircraft can be converted from one category to another by removing or adding equipment by simple mechanical means.

(b) The operator of an aircraft certificated under this section shall have the aircraft inspected by the Administrator, or by a certificated mechanic with an appropriate airframe rating, to determine airworthiness each time the aircraft is converted from the restricted category to another category for the carriage of passengers for compensation or hire, unless the Administrator finds this unnecessary for safety in a particular case.

(c) The aircraft complies with the applicable requirements of part 34.

[Doc. No. 5085, 29 FR 14569, Oct. 24, 1964, as amended by Amdt. 21–68, 55 FR 32860, Aug. 10, 1990; Amdt. 21–70, 57 FR 41369, Sept. 9, 1992]

### § 21.189 Issue of airworthiness certificate for limited category aircraft.

(a) An applicant for an airworthiness certificate for an aircraft in the limited category is entitled to the certificate when—

(1) He shows that the aircraft has been previously issued a limited category type certificate and that the aircraft conforms to that type certificate; and

(2) The Administrator finds, after inspection (including a flight check by the applicant), that the aircraft is in a good state of preservation and repair and is in a condition for safe operation.

(b) The Administrator prescribes limitations and conditions necessary for safe operation.

[Doc. No. 5085, 29 FR 14570, Oct. 24, 1964, as amended by Amdt. 21–4, 30 FR 9437, July 29, 1965]

### § 21.191 Experimental certificates.

Experimental certificates are issued for the following purposes:

(a) *Research and development.* Testing new aircraft design concepts, new aircraft equipment, new aircraft installations, new aircraft operating techniques, or new uses for aircraft.

(b) *Showing compliance with regulations.* Conducting flight tests and other operations to show compliance with the airworthiness regulations including flights to show compliance for issuance of type and supplemental type certificates, flights to substantiate major design changes, and flights to show compliance with the function and reliability requirements of the regulations.

(c) *Crew training.* Training of the applicant's flight crews.

(d) *Exhibition.* Exhibiting the aircraft's flight capabilities, performance, or unusual characteristics at air shows, motion picture, television, and similar productions, and the maintenance of exhibition flight proficiency, including (for persons exhibiting aircraft) flying to and from such air shows and productions.

(e) *Air racing.* Participating in air races, including (for such participants) practicing for such air races and flying to and from racing events.

(f) *Market surveys.* Use of aircraft for purposes of conducting market surveys, sales demonstrations, and customer crew training only as provided in § 21.195.

(g) *Operating amateur-built aircraft.* Operating an aircraft the major portion of which has been fabricated and assembled by persons who undertook the construction project solely for their own education or recreation.

(h) *Operating kit-built aircraft.* Operating a primary category aircraft that

meets the criteria of § 21.24(a)(1) that was assembled by a person from a kit manufactured by the holder of a production certificate for that kit, without the supervision and quality control of the production certificate holder under § 21.184(a).

[Amdt. 21-21, 38 FR 6858, May 7, 1968, as amended by Amdt. 21-57, 49 FR 39651, Oct. 9, 1984; Amdt. 21-70, 57 FR 41369, Sept. 9, 1992]

**§ 21.193 Experimental certificates: general.**

An applicant for an experimental certificate must submit the following information:

(a) A statement, in a form and manner prescribed by the Administrator setting forth the purpose for which the aircraft is to be used.

(b) Enough data (such as photographs) to identify the aircraft.

(c) Upon inspection of the aircraft, any pertinent information found necessary by the Administrator to safeguard the general public.

(d) In the case of an aircraft to be used for experimental purposes—

- (1) The purpose of the experiment;
- (2) The estimated time or number of flights required for the experiment;
- (3) The areas over which the experiment will be conducted; and
- (4) Except for aircraft converted from a previously certificated type without appreciable change in the external configuration, three-view drawings or three-view dimensioned photographs of the aircraft.

**§ 21.195 Experimental certificates: Aircraft to be used for market surveys, sales demonstrations, and customer crew training.**

(a) A manufacturer of aircraft manufactured within the United States may apply for an experimental certificate for an aircraft that is to be used for market surveys, sales demonstrations, or customer crew training.

(b) A manufacturer of aircraft engines who has altered a type certificated aircraft by installing different engines, manufactured by him within the United States, may apply for an experimental certificate for that aircraft to be used for market surveys, sales demonstrations, or customer crew training, if the basic aircraft, before al-

teration, was type certificated in the normal, acrobatic, commuter, or transport category.

(c) A person who has altered the design of a type certificated aircraft may apply for an experimental certificate for the altered aircraft to be used for market surveys, sales demonstrations, or customer crew training if the basic aircraft, before alteration, was type certificated in the normal, utility, acrobatic, or transport category.

(d) An applicant for an experimental certificate under this section is entitled to that certificate if, in addition to meeting the requirements of § 21.193—

(1) He has established an inspection and maintenance program for the continued airworthiness of the aircraft; and

(2) He shows that the aircraft has been flown for at least 50 hours, or for at least 5 hours if it is a type certificated aircraft which has been modified.

[Amdt. 21-21, 33 FR 6858, May 7, 1968, as amended by Amdt. 21-28, 35 FR 2818, Feb. 11, 1970; Amdt. 21-57, 49 FR 39651, Oct. 9, 1984; Amdt. 21-59, 52 FR 1836, Jan. 15, 1987]

**§ 21.197 Special flight permits.**

(a) A special flight permit may be issued for an aircraft that may not currently meet applicable airworthiness requirements but is capable of safe flight, for the following purposes:

(1) Flying the aircraft to a base where repairs, alterations, or maintenance are to be performed, or to a point of storage.

(2) Delivering or exporting the aircraft.

(3) Production flight testing new production aircraft.

(4) Evacuating aircraft from areas of impending danger.

(5) Conducting customer demonstration flights in new production aircraft that have satisfactorily completed production flight tests.

(b) A special flight permit may also be issued to authorize the operation of an aircraft at a weight in excess of its maximum certificated takeoff weight for flight beyond the normal range over water, or over land areas where adequate landing facilities or appropriate fuel is not available. The excess weight that may be authorized under this

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paragraph is limited to the additional fuel, fuel-carrying facilities, and navigation equipment necessary for the flight.

(c) Upon application, as prescribed in §§ 121.79 and 135.17 of this chapter, a special flight permit with a continuing authorization may be issued for aircraft that may not meet applicable airworthiness requirements but are capable of safe flight for the purpose of flying aircraft to a base where maintenance or alterations are to be performed. The permit issued under this paragraph is an authorization, including conditions and limitations for flight, which is set forth in the certificate holder's operations specifications. The permit issued under this paragraph may be issued to—

(1) Certificate holders authorized to conduct operations under Part 121 of this chapter; or

(2) Certificate holders authorized to conduct operations under Part 135 for those aircraft they operate and maintain under a continuous airworthiness maintenance program prescribed by § 135.411 (a)(2) or (b) of that part.

The permit issued under this paragraph is an authorization, including any conditions and limitations for flight, which is set forth in the certificate holder's operations specifications.

[Doc. No. 5085, 29 FR 14570, Oct. 24, 1964, as amended by Amdt. 21-21, 33 FR 6859, May 7, 1968; Amdt. 21-51, 45 FR 60170, Sept. 11, 1980; Amdt. 21-54, 46 FR 37878, July 23, 1981; Amdt. 21-79, 66 FR 21066, Apr. 27, 2001]

## § 21.199 Issue of special flight permits.

(a) Except as provided in § 21.197(c), an applicant for a special flight permit must submit a statement in a form and manner prescribed by the Administrator, indicating—

(1) The purpose of the flight.

(2) The proposed itinerary.

(3) The crew required to operate the aircraft and its equipment, e.g., pilot, co-pilot, navigator, etc.

(4) The ways, if any, in which the aircraft does not comply with the applicable airworthiness requirements.

(5) Any restriction the applicant considers necessary for safe operation of the aircraft.

(6) Any other information considered necessary by the Administrator for the

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purpose of prescribing operating limitations.

(b) The Administrator may make, or require the applicant to make appropriate inspections or tests necessary for safety.

[Doc. No. 5085, 29 FR 14570, Oct. 24, 1964, as amended by Amdt. 21-21, 33 FR 6859, May 7, 1968; Amdt. 21-22, 33 FR 11901, Aug. 22, 1968]

## Subpart I—Provisional Airworthiness Certificates

SOURCE: Docket No. 5085, 29 FR 14571, Oct. 24, 1964, unless otherwise noted.

### § 21.211 Applicability.

This subpart prescribes procedural requirements for the issue of provisional airworthiness certificates.

### § 21.213 Eligibility.

(a) A manufacturer who is a United States citizen may apply for a Class I or Class II provisional airworthiness certificate for aircraft manufactured by him within the U.S.

(b) Any holder of an air carrier operating certificate under Part 121 of this chapter who is a United States citizen may apply for a Class II provisional airworthiness certificate for transport category aircraft that meet either of the following:

(1) The aircraft has a current Class II provisional type certificate or an amendment thereto.

(2) The aircraft has a current provisional amendment to a type certificate that was preceded by a corresponding Class II provisional type certificate.

(c) An aircraft engine manufacturer who is a United States citizen and who has altered a type certificated aircraft by installing different type certificated engines, manufactured by him within the United States, may apply for a Class I provisional airworthiness certificate for that aircraft, if the basic aircraft, before alteration, was type certificated in the normal, utility, acrobatic, commuter, or transport category.

[Doc. No. 5085, 29 FR 14571, Oct. 24, 1964, as amended by Amdt. 21-59, 52 FR 1836, Jan. 15, 1987; Amdt. 21-79, 66 FR 21066, Apr. 27, 2001]

**§ 21.215 Application.**

Applications for provisional airworthiness certificates must be submitted to the Manufacturing Inspection District Office in the geographic area in which the manufacturer or air carrier is located. The application must be accompanied by the pertinent information specified in this subpart.

[Amdt. 21-67, 54 FR 39291, Sept. 25, 1989; 54 FR 52872, Dec. 22, 1989]

**§ 21.217 Duration.**

Unless sooner surrendered, superseded, revoked, or otherwise terminated, provisional airworthiness certificates are effective for the duration of the corresponding provisional type certificate, amendment to a provisional type certificate, or provisional amendment to the type certificate.

**§ 21.219 Transferability.**

Class I provisional airworthiness certificates are not transferable. Class II provisional airworthiness certificates may be transferred to an air carrier eligible to apply for a certificate under § 21.213(b).

**§ 21.221 Class I provisional airworthiness certificates.**

(a) Except as provided in § 21.225, an applicant is entitled to a Class I provisional airworthiness certificate for an aircraft for which a Class I provisional type certificate has been issued if—

(1) He meets the eligibility requirements of § 21.213 and he complies with this section; and

(2) The Administrator finds that there is no feature, characteristic or condition of the aircraft that would make the aircraft unsafe when operated in accordance with the limitations established in §§ 21.81(e) and 91.317 of this subchapter.

(b) The manufacturer must hold a provisional type certificate for the aircraft.

(c) The manufacturer must submit a statement that the aircraft conforms to the type design corresponding to the provisional type certificate and has been found by him to be in safe operating condition under all applicable limitations.

(d) The aircraft must be flown at least five hours by the manufacturer.

(e) The aircraft must be supplied with a provisional aircraft flight manual or other document and appropriate placards containing the limitations established by §§ 21.81(e) and 91.317.

[Doc. No. 5085, 29 FR 14571, Oct. 24, 1964, as amended by Amdt. 21-66, 54 FR 34329, Aug. 18, 1989]s

**§ 21.223 Class II provisional airworthiness certificates.**

(a) Except as provided in § 21.225, an applicant is entitled to a Class II provisional airworthiness certificate for an aircraft for which a Class II provisional type certificate has been issued if—

(1) He meets the eligibility requirements of § 21.213 and he complies with this section; and

(2) The Administrator finds that there is no feature, characteristic, or condition of the aircraft that would make the aircraft unsafe when operated in accordance with the limitations established in §§ 21.83(h), 91.317, and 121.207 of this chapter.

(b) The applicant must show that a Class II provisional type certificate for the aircraft has been issued to the manufacturer.

(c) The applicant must submit a statement by the manufacturer that the aircraft has been manufactured under a quality control system adequate to ensure that the aircraft conforms to the type design corresponding with the provisional type certificate.

(d) The applicant must submit a statement that the aircraft has been found by him to be in a safe operating condition under the applicable limitations.

(e) The aircraft must be flown at least five hours by the manufacturer.

(f) The aircraft must be supplied with a provisional aircraft flight manual containing the limitations established by §§ 21.83(h), 91.317, and 121.207 of this chapter.

[Doc. No. 5085, 29 FR 14571, Oct. 24, 1964, as amended by Amdt. 21-12, 31 FR 13389, Oct. 15, 1966; Amdt. 21-66, 54 FR 34329, Aug. 18, 1989]

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### § 21.225 Provisional airworthiness certificates corresponding with provisional amendments to type certificates.

(a) An applicant is entitled to a Class I or a Class II provisional airworthiness certificate, for an aircraft, for which a provisional amendment to the type certificate has been issued, if—

(1) He meets the eligibility requirements of § 21.213 and he complies with this section; and

(2) The Administrator finds that there is no feature, characteristic, or condition of the aircraft, as modified in accordance with the provisionally amended type certificate, that would make the aircraft unsafe when operated in accordance with the applicable limitations established in §§ 21.85(g), 91.317, and 121.207 of this chapter.

(b) The applicant must show that the modification was made under a quality control system adequate to ensure that the modification conforms to the provisionally amended type certificate.

(c) The applicant must submit a statement that the aircraft has been found by him to be in a safe operating condition under the applicable limitations.

(d) The aircraft must be flown at least five hours by the manufacturer.

(e) The aircraft must be supplied with a provisional aircraft flight manual or other document and appropriate placards containing the limitations required by §§ 21.85(g), 91.317, and 121.207 of this chapter.

[Doc. No. 5085, 29 FR 14571, Oct. 24, 1964, as amended by Amdt. 21–12, 31 FR 13389, Oct. 15, 1966; Amdt. 21–66, 54 FR 34329, Aug. 18, 1989]

### Subpart J—Delegation Option Authorization Procedures

SOURCE: Amdt. 21–5, 30 FR 11375, Sept. 8, 1965, unless otherwise noted.

#### § 21.231 Applicability.

This subpart prescribes procedures for—

(a) Obtaining and using a delegation option authorization for type, production, and airworthiness certification (as applicable) of—

- (1) Small airplanes and small gliders;
- (2) Commuter category airplanes;

(3) Normal category rotorcraft;

(4) Turbojet engines of not more than 1,000 pounds thrust;

(5) Turbopropeller and reciprocating engines of not more than 500 brake horsepower; and

(6) Propellers manufactured for use on engines covered by paragraph (a)(4) of this section; and

(b) Issuing airworthiness approval tags for engines, propellers, and parts of products covered by paragraph (a) of this section.

[Amdt. 21–5, 30 FR 11375, Sept. 8, 1965, as amended by Amdt. 21–59, 52 FR 1836, Jan. 15, 1987]

#### § 21.235 Application.

(a) An application for a delegation option authorization must be submitted, in a form and manner prescribed by the Administrator, to the Aircraft Certification Office for the area in which the manufacturer is located.

(b) The application must include the names, signatures, and titles of the persons for whom authorization to sign airworthiness certificates, repair and alteration forms, and inspection forms is requested.

[Doc. No. 5085, 29 FR 14574, Oct. 24, 1964, as amended by Amdt. 21–67, 54 FR 39291, Sept. 25, 1989]

#### § 21.239 Eligibility.

To be eligible for a delegation option authorization, the applicant must—

(a) Hold a current type certificate, issued to him under the standard procedures, for a product type certificated under the same part as the products for which the delegation option authorization is sought;

(b) Hold a current production certificate issued under the standard procedures;

(c) Employ a staff of engineering, flight test, production and inspection personnel who can determine compliance with the applicable airworthiness requirements of this chapter; and

(d) Meet the requirements of this subpart.

#### § 21.243 Duration.

A delegation option authorization is effective until it is surrendered or the



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Administrator suspends, revokes, or otherwise terminates it.

### § 21.245 Maintenance of eligibility.

The holder of a delegation option authorization shall continue to meet the requirements for issue of the authorization or shall notify the Administrator within 48 hours of any change (including a change of personnel) that could affect the ability of the holder to meet those requirements.

### § 21.247 Transferability.

A delegation option authorization is not transferable.

### § 21.249 Inspections.

Upon request, each holder of a delegation option authorization and each applicant shall let the Administrator inspect his organization, facilities, product, and records.

### § 21.251 Limits of applicability.

(a) Delegation option authorizations apply only to products that are manufactured by the holder of the authorization.

(b) Delegation option authorizations may be used for—

(1) Type certification;

(2) Changes in the type design of products for which the manufacturer holds, or obtains, a type certificate;

(3) The amendment of a production certificate held by the manufacturer to include additional models or additional types for which he holds or obtains a type certificate; and

(4) The issue of—

(i) Experimental certificates for aircraft for which the manufacturer has applied for a type certificate or amended type certificate under § 21.253, to permit the operation of those aircraft for the purpose of research and development, crew training, market surveys, or the showing of compliance with the applicable airworthiness requirements;

(ii) Airworthiness certificates (other than experimental certificates) for aircraft for which the manufacturer holds a type certificate and holds or is in the process of obtaining a production certificate;

(iii) Airworthiness approval tags (FAA Form 8130-3) for engines and pro-

pellers for which the manufacturer holds a type certificate and holds or is in the process of obtaining a production certificate; and

(iv) Airworthiness approval tags (FAA Form 8130-3) for parts of products covered by this section.

(c) Delegation option procedures may be applied to one or more types selected by the manufacturer, who must notify the FAA of each model, and of the first serial number of each model manufactured by him under the delegation option procedures. Other types or models may remain under the standard procedures.

(d) Delegation option authorizations are subject to any additional limitations prescribed by the Administrator after inspection of the applicant's facilities or review of the staff qualifications.

[Amdt. 21-5, 30 FR 11375, Sept. 8, 1965, as amended by Amdt. 21-31, 35 FR 7292, May 9, 1970; Amdt. 21-43, 40 FR 2576, Jan. 14, 1975]

### § 21.253 Type certificates: application.

(a) To obtain, under the delegation option authorization, a type certificate for a new product or an amended type certificate, the manufacturer must submit to the Administrator—

(1) An application for a type certificate (FAA Form 312);

(2) A statement listing the airworthiness requirements of this chapter (by part number and effective date) that the manufacturer considers applicable;

(3) After determining that the type design meets the applicable requirements, a statement certifying that this determination has been made;

(4) After placing the required technical data and type inspection report in the technical data file required by § 21.293(a)(1)(i), a statement certifying that this has been done;

(5) A proposed type certificate data sheet; and

(6) An Aircraft Flight Manual (if required) or a summary of required operating limitations and other information necessary for safe operation of the product.

### § 21.257 Type certificates: issue.

An applicant is entitled to a type certificate for a product manufactured

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under a delegation option authorization if the Administrator finds that the product meets the applicable airworthiness, noise, fuel venting, and exhaust emission requirements (including applicable acoustical change or emissions change requirements in the case of changes in type design).

[Amdt. 21-68, 55 FR 32860, Aug. 10, 1990]

### § 21.261 Equivalent safety provisions.

The manufacturer shall obtain the Administrator's concurrence on the application of all equivalent safety provisions applied under § 21.21.

### § 21.267 Production certificates.

To have a new model or new type certificate listed on his production certificate (issued under Subpart G of this part), the manufacturer must submit to the Administrator—

(a) An application for an amendment to the production certificate;

(b) After determining that the production certification requirements of Subpart G, with respect to the new model or type, are met, a statement certifying that this determination has been made;

(c) A statement identifying the type certificate number under which the product is being manufactured; and

(d) After placing the manufacturing and quality control data required by § 21.143 with the data required by § 21.293(a)(1)(ii), a statement certifying that this has been done.

### § 21.269 Export airworthiness approvals.

The manufacturer may issue export airworthiness approvals.

### § 21.271 Airworthiness approval tags.

(a) A manufacturer may issue an airworthiness approval tag (FAA Form 8130-3) for each engine and propeller covered by § 21.251(b)(4), and may issue an airworthiness approval tag for parts of each product covered by that section, if he finds, on the basis of inspection and operation tests, that those products conform to a type design for which he holds a type certificate and are in condition for safe operation.

(b) When a new model has been included on the Production Limitation

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Record, the production certification number shall be stamped on the engine or propeller identification data plate instead of issuing an airworthiness approval tag.

[Amdt. 21-5, 30 FR 11375, Sept. 8, 1965, as amended by Amdt. 21-43, 40 FR 2577, Jan. 14, 1975]

### § 21.273 Airworthiness certificates other than experimental.

(a) The manufacturer may issue an airworthiness certificate for aircraft manufactured under a delegation option authorization if he finds, on the basis of the inspection and production flight check, that each aircraft conforms to a type design for which he holds a type certificate and is in a condition for safe operation.

(b) The manufacturer may authorize any employee to sign airworthiness certificates if that employee—

(1) Performs, or is in direct charge of, the inspection specified in paragraph (a) of this section; and

(2) Is listed on the manufacturer's application for the delegation option authorization, or on amendments thereof.

[Amdt. 21-5, 30 FR 11375, Sept. 8, 1965, as amended by Amdt. 21-18, 32 FR 15472, Nov. 7, 1967]

### § 21.275 Experimental certificates.

(a) The manufacturer shall, before issuing an experimental certificate, obtain from the Administration any limitations and conditions that the Administrator considers necessary for safety.

(b) For experimental certificates issued by the manufacturer, under this subpart, for aircraft for which the manufacturer holds the type certificate and which have undergone changes to the type design requiring flight test, the manufacturer may prescribe any operating limitations that he considers necessary.

### § 21.277 Data review and service experience.

(a) If the Administrator finds that a product for which a type certificate was issued under this subpart does not meet the applicable airworthiness requirements, or that an unsafe feature or characteristic caused by a defect in

design or manufacture exists, the manufacturer, upon notification by the Administrator, shall investigate the matter and report to the Administrator the results of the investigation and the action, if any, taken or proposed.

(b) If corrective action by the user of the product is necessary for safety because of any noncompliance or defect specified in paragraph (a) of this section, the manufacturer shall submit the information necessary for the issue of an Airworthiness Directive under Part 39.

#### § 21.289 Major repairs, rebuilding and alteration.

For types covered by a delegation option authorization, a manufacturer may—

(a) After finding that a major repair or major alteration meets the applicable airworthiness requirements of this chapter, approve that repair or alteration; and

(b) Authorize any employee to execute and sign FAA Form 337 and make required log book entries if that employee—

(1) Inspects, or is in direct charge of inspecting, the repair, rebuilding, or alteration; and

(2) Is listed on the application for the delegation option authorization, or on amendments thereof.

#### § 21.293 Current records.

(a) The manufacturer shall maintain at his factory, for each product type certificated under a delegation option authorization, current records containing the following:

(1) For the duration of the manufacturing operating under the delegation option authorization—

(i) A technical data file that includes the type design drawings, specifications, reports on tests prescribed by this part, and the original type inspection report and amendments to that report;

(ii) The data (including amendments) required to be submitted with the original application for each production certificate; and

(iii) A record of any rebuilding and alteration performed by the manufacturer on products manufactured under the delegation option authorization.

(2) For 2 years—

(i) A complete inspection record for each product manufactured, by serial number, and data covering the processes and tests to which materials and parts are subjected; and

(ii) A record of reported service difficulties.

(b) The records and data specified in paragraph (a) of this section shall be—

(1) Made available, upon the Administrator's request, for examination by the Administrator at any time; and

(2) Identified and sent to the Administrator as soon as the manufacturer no longer operates under the delegation option procedures.

### Subpart K—Approval of Materials, Parts, Processes, and Appliances

SOURCE: Docket No. 5085, 29 FR 14574, Oct. 24, 1964, unless otherwise noted.

#### § 21.301 Applicability.

This subpart prescribes procedural requirements for the approval of certain materials, parts, processes, and appliances.

#### § 21.303 Replacement and modification parts.

(a) Except as provided in paragraph (b) of this section, no person may produce a modification or replacement part for sale for installation on a type certificated product unless it is produced pursuant to a Parts Manufacturer Approval issued under this subpart.

(b) This section does not apply to the following:

(1) Parts produced under a type or production certificate.

(2) Parts produced by an owner or operator for maintaining or altering his own product.

(3) Parts produced under an FAA Technical Standard Order.

(4) Standard parts (such as bolts and nuts) conforming to established industry or U.S. specifications.

(c) An application for a Parts Manufacturer Approval is made to the Manager of the Aircraft Certification Office for the geographic area in which the manufacturing facility is located and must include the following:

(1) The identity of the product on which the part is to be installed.

(2) The name and address of the manufacturing facilities at which these parts are to be manufactured.

(3) The design of the part, which consists of—

(i) Drawings and specifications necessary to show the configuration of the part; and

(ii) Information on dimensions, materials, and processes necessary to define the structural strength of the part.

(4) Test reports and computations necessary to show that the design of the part meets the airworthiness requirements of the Federal Aviation Regulations applicable to the product on which the part is to be installed, unless the applicant shows that the design of the part is identical to the design of a part that is covered under a type certificate. If the design of the part was obtained by a licensing agreement, evidence of that agreement must be furnished.

(d) An applicant is entitled to a Parts Manufacturer Approval for a replacement or modification part if—

(1) The Administrator finds, upon examination of the design and after completing all tests and inspections, that the design meets the airworthiness requirements of the Federal Aviation Regulations applicable to the product on which the part is to be installed; and

(2) He submits a statement certifying that he has established the fabrication inspection system required by paragraph (h) of this section.

(e) Each applicant for a Parts Manufacturer Approval must allow the Administrator to make any inspection or test necessary to determine compliance with the applicable Federal Aviation Regulations. However, unless otherwise authorized by the Administrator—

(1) No part may be presented to the Administrator for an inspection or test unless compliance with paragraphs (f)(2) through (4) of this section has been shown for that part; and

(2) No change may be made to a part between the time that compliance with paragraphs (f)(2) through (4) of this section is shown for that part and the time that the part is presented to the

Administrator for the inspection or test.

(f) Each applicant for a Parts Manufacturer Approval must make all inspections and tests necessary to determine—

(1) Compliance with the applicable airworthiness requirements;

(2) That materials conform to the specifications in the design;

(3) That the part conforms to the drawings in the design; and

(4) That the fabrication processes, construction, and assembly conform to those specified in the design.

(g) The Administrator does not issue a Parts Manufacturer Approval if the manufacturing facilities for the part are located outside of the United States, unless the Administrator finds that the location of the manufacturing facilities places no burden on the FAA in administering applicable airworthiness requirements.

(h) Each holder of a Parts Manufacturer Approval shall establish and maintain a fabrication inspection system that ensures that each completed part conforms to its design data and is safe for installation on applicable type certificated products. The system shall include the following:

(1) Incoming materials used in the finished part must be as specified in the design data.

(2) Incoming materials must be properly identified if their physical and chemical properties cannot otherwise be readily and accurately determined.

(3) Materials subject to damage and deterioration must be suitably stored and adequately protected.

(4) Processes affecting the quality and safety of the finished product must be accomplished in accordance with acceptable specifications.

(5) Parts in process must be inspected for conformity with the design data at points in production where accurate determination can be made. Statistical quality control procedures may be employed where it is shown that a satisfactory level of quality will be maintained for the particular part involved.

(6) Current design drawings must be readily available to manufacturing and inspection personnel, and used when necessary.

(7) Major changes to the basic design must be adequately controlled and approved before being incorporated in the finished part.

(8) Rejected materials and components must be segregated and identified in such a manner as to preclude their use in the finished part.

(9) Inspection records must be maintained, identified with the completed part, where practicable, and retained in the manufacturer's file for a period of at least 2 years after the part has been completed.

(i) A Parts Manufacturer Approval issued under this section is not transferable and is effective until surrendered or withdrawn or otherwise terminated by the Administrator.

(j) The holder of a Parts Manufacturer Approval shall notify the FAA in writing within 10 days from the date the manufacturing facility at which the parts are manufactured is relocated or expanded to include additional facilities at other locations.

(k) Each holder of a Parts Manufacturer Approval shall determine that each completed part conforms to the design data and is safe for installation on type certificated products.

[Amdt. 21-38, 37 FR 10659, May 26, 1972, as amended by Amdt. 21-41, 39 FR 41965, Dec. 4, 1974; Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

#### **§ 21.305 Approval of materials, parts, processes, and appliances.**

Whenever a material, part, process, or appliance is required to be approved under this chapter, it may be approved—

(a) Under a Parts Manufacturer Approval issued under § 21.303;

(b) Under a Technical Standard Order issued by the Administrator. Advisory Circular 20-110 contains a list of Technical Standard Orders that may be used to obtain approval. Copies of the Advisory Circular may be obtained from the U.S. Department of Transportation, Publication Section (M-443.1), Washington, D.C. 20590;

(c) In conjunction with type certification procedures for a product; or

(d) In any other manner approved by the Administrator.

[Amdt. 21-38, 37 FR 10659, May 26, 1972, as amended by Amdt. 21-50, 45 FR 38346, June 9, 1980]

### **Subpart L—Export Airworthiness Approvals**

SOURCE: Amdt. 21-2, 30 FR 8465, July 2, 1965, unless otherwise noted.

#### **§ 21.321 Applicability.**

(a) This subpart prescribes—

(1) Procedural requirements for the issue of export airworthiness approvals; and

(2) Rules governing the holders of those approvals.

(b) For the purposes of this subpart—

(1) A Class I product is a complete aircraft, aircraft engine, or propeller, which—

(i) Has been type certificated in accordance with the applicable Federal Aviation Regulations and for which Federal Aviation Specifications or type certificate data sheets have been issued; or

(ii) Is identical to a type certificated product specified in paragraph (b)(1)(i) of this section in all respects except as is otherwise acceptable to the civil aviation authority of the importing state.

(2) A Class II product is a major component of a Class I product (e.g., wings, fuselages, empennage assemblies, landing gears, power transmissions, control surfaces, etc), the failure of which would jeopardize the safety of a Class I product; or any part, material, or appliance, approved and manufactured under the Technical Standard Order (TSO) system in the "C" series.

(3) A Class III product is any part or component which is not a Class I or Class II product and includes standard parts, i.e., those designated as AN, NAS, SAE, etc.

(4) The words "newly overhauled" when used to describe a product means that the product has not been operated or placed in service, except for functional testing, since having been overhauled, inspected and approved for return to service in accordance with the applicable Federal Aviation Regulations.

[Amdt. 21-2, 30 FR 11375, July 2, 1965, as amended by Amdt. 21-48, 44 FR 15649, Mar. 15, 1979]

## § 21.323

### § 21.323 Eligibility.

(a) Any exporter or his authorized representative may obtain an export airworthiness approval for a Class I or Class II product.

(b) Any manufacturer may obtain an export airworthiness approval for a Class III product if the manufacturer—

(1) Has in his employ a designated representative of the Administrator who has been authorized to issue that approval; and

(2) Holds for that product—

(i) A production certificate;

(ii) An approved production inspection system;

(iii) An FAA Parts Manufacturer Approval (PMA); or

(iv) A Technical Standard Order authorization.

### § 21.325 Export airworthiness approvals.

(a) *Kinds of approvals.* (1) Export airworthiness approval of Class I products is issued in the form of Export Certificates of Airworthiness, FAA Form 8130-4. Such a certificate does not authorize the operation of aircraft.

(2) Export airworthiness approval of Class II and III products is issued in the form of Airworthiness Approval Tags, FAA Form 8130-3.

(b) *Products which may be approved.* Export airworthiness approvals are issued for—

(1) New aircraft that are assembled and that have been flight-tested, and other Class I products located in the United States, except that export airworthiness approval may be issued for any of the following without assembly or flight-test:

(i) A small airplane type certificated under Part 3 or 4a of the Civil Air Regulations, or Part 23 of the Federal Aviation Regulations, and manufactured under a production certificate;

(ii) A glider type certificated under § 21.23 of this part and manufactured under a production certificate; or

(iii) A normal category rotorcraft type certificated under Part 6 of the Civil Air Regulations or Part 27 of the Federal Aviation Regulations and manufactured under a production certificate.

(2) Used aircraft possessing a valid U.S. airworthiness certificate, or other

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used Class I products that have been maintained in accordance with the applicable CAR's or FAR's and are located in a foreign country, if the Administrator finds that the location places no undue burden upon the FAA in administering the provisions of this regulation.

(3) Class II and III products that are manufactured and located in the United States.

(c) *Export airworthiness approval exceptions.* If the export airworthiness approval is issued on the basis of a written statement by the importing state as provided for in § 21.327(e)(4), the requirements that are not met and the differences in configuration, if any, between the product to be exported and the related type certificated product, are listed on the export airworthiness approval as exceptions.

[Amdt. 21-2, 30 FR 8465, July 2, 1965, as amended by Amdt. 21-14, 32 FR 2999, Feb. 17, 1967; Amdt. 21-43, 40 FR 2577, Jan. 14, 1975; Amdt. 21-48, 44 FR 15649, Mar. 15, 1979]

### § 21.327 Application.

(a) Except as provided in paragraph (b) of this section, an application for export airworthiness approval for a Class I or Class II product is made on a form and in a manner prescribed by the Administrator and is submitted to the appropriate Flight Standards District Office or to the nearest international field office.

(b) A manufacturer holding a production certificate may apply orally to the appropriate Flight Standards District Office or the nearest international field office for export airworthiness approval of a Class II product approved under his production certificate.

(c) Application for export airworthiness approval of Class III products is made to the designated representative of the Administrator authorized to issue those approvals.

(d) A separate application must be made for—

(1) Each aircraft;

(2) Each engine and propeller, except that one application may be made for more than one engine or propeller, if all are of the same type and model and are exported to the same purchaser and country; and

(3) Each type of Class II product, except that one application may be used for more than one type of Class II product when—

(i) They are separated and identified in the application as to the type and model of the related Class I product; and

(ii) They are to be exported to the same purchaser and country.

(e) Each application must be accompanied by a written statement from the importing country that will validate the export airworthiness approval if the product being exported is—

(1) An aircraft manufactured outside the United States and being exported to a country with which the United States has a reciprocal agreement concerning the validation of export certificates;

(2) An unassembled aircraft which has not been flight-tested;

(3) A product that does not meet the special requirement of the importing country; or

(4) A product that does not meet a requirement specified in §§ 21.329, 21.331, or 21.333, as applicable, for the issuance of an export airworthiness approval. The written statement must list the requirements not met.

(f) Each application for export airworthiness approval of a Class I product must include, as applicable:

(1) A Statement of Conformity, FAA Form 8130-9, for each new product that has not been manufactured under a production certificate.

(2) A weight and balance report, with a loading schedule when applicable, for each aircraft in accordance with Part 43 of this chapter. For transport aircraft and commuter category airplanes this report must be based on an actual weighing of the aircraft within the preceding twelve months, but after any major repairs or alterations to the aircraft. Changes in equipment not classed as major changes that are made after the actual weighing may be accounted for on a “computed” basis and the report revised accordingly. Manufacturers of new nontransport category airplanes, normal category rotorcraft, and gliders may submit reports having computed weight and balance data, in place of an actual weighing of the aircraft, if fleet weight control procedures

approved by the FAA have been established for such aircraft. In such a case, the following statement must be entered in each report: “The weight and balance data shown in this report are computed on the basis of Federal Aviation Administration approved procedures for establishing fleet weight averages.” The weight and balance report must include an equipment list showing weights and moment arms of all required and optional items of equipment that are included in the certificated empty weight.

(3) A maintenance manual for each new product when such a manual is required by the applicable airworthiness rules.

(4) Evidence of compliance with the applicable airworthiness directives. A suitable notation must be made when such directives are not complied with.

(5) When temporary installations are incorporated in an aircraft for the purpose of export delivery, the application form must include a general description of the installations together with a statement that the installation will be removed and the aircraft restored to the approved configuration upon completion of the delivery flight.

(6) Historical records such as aircraft and engine log books, repair and alteration forms, etc., for used aircraft and newly overhauled products.

(7) For products intended for overseas shipment, the application form must describe the methods used, if any, for the preservation and packaging of such products to protect them against corrosion and damage while in transit or storage. The description must also indicate the duration of the effectiveness of such methods.

(8) The Airplane or Rotorcraft Flight Manual when such material is required by the applicable airworthiness regulations for the particular aircraft.

(9) A statement as to the date when title passed or is expected to pass to a foreign purchaser.

(10) The data required by the special requirements of the importing country.

[Amdt. 21-2, 30 FR 8465, July 2, 1965, as amended by Doc. No. 8084, 32 FR 5769, Apr. 11, 1967; Amdt. 21-48, 44 FR 15650, Mar. 15, 1979; Amdt. 21-59, 52 FR 1836, Jan. 15, 1987]

**§ 21.329 Issue of export certificates of airworthiness for Class I products.**

An applicant is entitled to an export certificate of airworthiness for a Class I product if that applicant shows at the time the product is submitted to the Administrator for export airworthiness approval that it meets the requirements of paragraphs (a) through (f) of this section, as applicable, except as provided in paragraph (g) of this section:

(a) New or used aircraft manufactured in the United States must meet the airworthiness requirement for a standard U.S. airworthiness certificate under § 21.183, or meet the airworthiness certification requirements for a “restricted” airworthiness certificate under § 21.185.

(b) New or used aircraft manufactured outside the United States must have a valid U.S. standard airworthiness certificate.

(c) Used aircraft must have undergone an annual type inspection and be approved for return to service in accordance with Part 43 of this chapter. The inspection must have been performed and properly documented within 30 days before the date the application is made for an export certificate of airworthiness. In complying with this paragraph, consideration may be given to the inspections performed on an aircraft maintained in accordance with a continuous airworthiness maintenance program under Part 121 of this chapter or a progressive inspection program under Part 91 of this chapter, within the 30 days prior to the date the application is made for an export certificate of airworthiness.

(d) New engines and propellers must conform to the type design and must be in a condition for safe operation.

(e) Used engines and propellers which are not being exported as part of a certificated aircraft must have been newly overhauled.

(f) The special requirements of the importing country must have been met.

(g) A product need not meet a requirement specified in paragraphs (a) through (f) of this section, as applicable, if acceptable to the importing country and the importing country in-

dicates that acceptability in accordance with § 21.327(e)(4) of this part.

[Amdt. 21–2, 30 FR 8465, July 2, 1965, as amended by Amdt. 21–8, 31 FR 2421, Feb. 5, 1966; Amdt. 21–9, 31 FR 3336, Mar. 3, 1966; Amdt. 21–48, 44 FR 15650, Mar. 15, 1979; Amdt. 21–79, 66 FR 21066, Apr. 27, 2001]

**§ 21.331 Issue of airworthiness approval tags for Class II products.**

(a) An applicant is entitled to an export airworthiness approval tag for Class II products if that applicant shows, except as provided in paragraph (b) of this section, that—

(1) The products are new or have been newly overhauled and conform to the approved design data;

(2) The products are in a condition for safe operation;

(3) The products are identified with at least the manufacturer’s name, part number, model designation (when applicable), and serial number or equivalent; and

(4) The products meet the special requirements of the importing country.

(b) A product need not meet a requirement specified in paragraph (a) of this section if acceptable to the importing country and the importing country indicates that acceptability in accordance with § 21.327(e)(4) of this part.

[Amdt. 21–2, 30 FR 8465, July 2, 1965, as amended by Amdt. 21–48, 44 FR 15650, Mar. 15, 1979]

**§ 21.333 Issue of export airworthiness approval tags for Class III products.**

(a) An applicant is entitled to an export airworthiness approval tag for Class III products if that applicant shows, except as provided in paragraph (b) of this section, that—

(1) The products conform to the approved design data applicable to the Class I or Class II product of which they are a part;

(2) The products are in a condition for safe operation; and

(3) The products comply with the special requirements of the importing country.

(b) A product need not meet a requirement specified in paragraph (a) of this section if acceptable to the importing country and the importing country indicates that acceptability in



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accordance with § 21.327(e)(4) of this part.

[Amdt. 21-2, 30 FR 8465, July 2, 1965, as amended by Amdt. 21-48, 44 FR 15650, Mar. 15, 1979]

### § 21.335 Responsibilities of exporters.

Each exporter receiving an export airworthiness approval for a product shall—

(a) Forward to the air authority of the importing country all documents and information necessary for the proper operation of the products being exported, e.g., Flight Manuals, Maintenance Manuals, Service Bulletins, and assembly instructions, and such other material as is stipulated in the special requirements of the importing country. The documents, information, and material may be forwarded by any means consistent with the special requirements of the importing country;

(b) Forward the manufacturer's assembly instructions and an FAA-approved flight test checkoff form to the air authority of the importing country when unassembled aircraft are being exported. These instructions must be in sufficient detail to permit whatever rigging, alignment, and ground testing is necessary to ensure that the aircraft will conform to the approved configuration when assembled;

(c) Remove or cause to be removed any temporary installation incorporated on an aircraft for the purpose of export delivery and restore the aircraft to the approved configuration upon completion of the delivery flight;

(d) Secure all proper foreign entry clearances from all the countries involved when conducting sales demonstrations or delivery flights; and

(e) When title to an aircraft passes or has passed to a foreign purchaser—

(1) Request cancellation of the U.S. registration and airworthiness certificates, giving the date of transfer of title, and the name and address of the foreign owner;

(2) Return the Registration and Airworthiness Certificates, AC Form 8050.3 and FAA Form 8100-2, to the FAA; and

(3) Submit a statement certifying that the United States' identification and registration numbers have been re-

moved from the aircraft in compliance with § 45.33.

[Amdt. 21-2, 30 FR 8465, July 2, 1965, as amended by Amdt. 21-48, 44 FR 15650, Mar. 15, 1979]

### § 21.337 Performance of inspections and overhauls.

Unless otherwise provided for in this subpart, each inspection and overhaul required for export airworthiness approval of Class I and Class II products must be performed and approved by one of the following:

(a) The manufacturer of the product.

(b) An appropriately certificated domestic repair station.

(c) An appropriately certificated foreign repair station having adequate overhaul facilities, and maintenance organization appropriate to the product involved, when the product is a Class I product located in a foreign country and an international office of Flight Standards Service has approved the use of such foreign repair station.

(d) The holder of an inspection authorization as provided in Part 65 of this chapter.

(e) An air carrier, when the product is one that the carrier has maintained under its own or another air carrier's continuous airworthiness maintenance program and maintenance manuals as provided in Part 121 of this chapter.

(f) A commercial operator, when the product is one that the operator has maintained under its continuous airworthiness maintenance program and maintenance manual as provided in Part 121 of this chapter.

[Amdt. 21-2, 30 FR 8465, July 2, 1965, as amended by Amdt. 21-8, 31 FR 2421, Feb. 5, 1966; Amdt. 21-79, 66 FR 21066, Apr. 27, 2001]

### § 21.339 Special export airworthiness approval for aircraft.

A special export certificate of airworthiness may be issued for an aircraft located in the United States that is to be flown to several foreign countries for the purpose of sale, without returning the aircraft to the United States for the certificate if—

(a) The aircraft possesses either—

(1) A standard U.S. certificate of airworthiness; or

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(2) A special U.S. certificate of airworthiness in the restricted category issued under § 21.185;

(b) The owner files an application as required by § 21.327 except that items 3 and 4 of the application (FAA Form 8130-1) need not be completed;

(c) The aircraft is inspected by the Administrator before leaving the United States and is found to comply with all the applicable requirements;

(d) A list of foreign countries in which it is intended to conduct sales demonstrations, together with the expected dates and duration of such demonstration, is included in the application;

(e) For each prospective importing country, the applicant shows that—

(1) He has met that country's special requirements, other than those requiring that documents, information, and materials be furnished; and

(2) He has the documents, information, and materials necessary to meet the special requirements of that country; and

(f) All other requirements for the issuance of a Class I export certificate of airworthiness are met.

[Amdt. 21-12, 31 FR 12565, Sept. 23, 1966, as amended by Amdt. 21-43, 40 FR 2577, Jan. 14, 1975; Amdt. 21-55, 46 FR 44737, Sept. 8, 1981]

## Subpart M—Designated Alteration Station Authorization Procedures

SOURCE: Amdt. 21-6, 30 FR 11379, Sept. 8, 1965; 30 FR 11849, Sept. 16, 1965, unless otherwise noted.

### § 21.431 Applicability.

(a) This subpart prescribes Designated Alteration Station (DAS) authorization procedures for—

(1) Issuing supplemental type certificates;

(2) Issuing experimental certificates; and

(3) Amending standard airworthiness certificates.

(b) This subpart applies to domestic repair stations, air carriers, commercial operators of large aircraft, and manufacturers of products.

[Amdt. 21-6, 30 FR 11379, Sept. 8, 1965; 30 FR 11849, Sept. 16, 1965, as amended by Amdt. 21-74, 62 FR 13253, Mar. 19, 1997]

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### § 21.435 Application.

The applicant for a DAS authorization must submit an application, in writing and signed by an official of the applicant, to the Aircraft Certification Office responsible for the geographic area in which the applicant is located. The application must contain—

(a) The repair station certificate number held by the repair station applicant, and the current ratings covered by the certificate;

(b) The air carrier or commercial operator operating certificate number held by the air carrier or commercial operator applicant, and the products that it may operate and maintain under the certificate;

(c) A statement by the manufacturer applicant of the products for which he holds the type certificate;

(d) The names, signatures, and titles of the persons for whom authorization to issue supplemental type certificates or experimental certificates, or amend airworthiness certificates, is requested; and

(e) A description of the applicant's facilities, and of the staff with which compliance with § 21.439(a)(4) is to be shown.

[Amdt. 21-6, 30 FR 11379, Sept. 8, 1965; 30 FR 11849, Sept. 16, 1965, as amended by Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

### § 21.439 Eligibility.

(a) To be eligible for a DAS authorization, the applicant must—

(1) Hold a current domestic repair station certificate under Part 145, or air carrier or commercial operator operating certificate under Part 121;

(2) Be a manufacturer of a product for which it has alteration authority under § 43.3(i) of this subchapter;

(3) Have adequate maintenance facilities and personnel, in the United States, appropriate to the products that it may operate and maintain under its certificate; and

(4) Employ, or have available, a staff of engineering, flight test, and inspection personnel who can determine compliance with the applicable airworthiness requirements of this chapter.

(b) At least one member of the staff required by paragraph (a)(4) of this section must have all of the following qualifications:

(1) A thorough working knowledge of the applicable requirements of this chapter.

(2) A position, on the applicant's staff, with authority to establish alteration programs that ensure that altered products meet the applicable requirements of this chapter.

(3) At least one year of satisfactory experience in direct contact with the FAA (or its predecessor agency (CAA)) while processing engineering work for type certification or alteration projects.

(4) At least eight years of aeronautical engineering experience (which may include the one year required by paragraph (b)(3) of this section).

(5) The general technical knowledge and experience necessary to determine that altered products, of the types for which a DAS authorization is requested, are in condition for safe operation.

#### § 21.441 Procedure manual.

(a) No DAS may exercise any authority under this subpart unless it submits, and obtains approval of, a procedure manual containing—

(1) The procedures for issuing STCs; and

(2) The names, signatures, and responsibilities of officials and of each staff member required by § 21.439(a)(4), identifying those persons who—

(i) Have authority to make changes in procedures that require a revision to the procedure manual; and

(ii) Are to conduct inspections (including conformity and compliance inspections) or approve inspection reports, prepare or approve data, plan or conduct tests, approve the results of tests, amend airworthiness certificates, issue experimental certificates, approve changes to operating limitations or Aircraft Flight Manuals, and sign supplemental type certificates.

(b) No DAS may continue to perform any DAS function affected by any change in facilities or staff necessary to continue to meet the requirements of § 21.439, or affected by any change in procedures from those approved under paragraph (a) of this section, unless that change is approved and entered in the manual. For this purpose, the manual shall contain a log-of-revisions

page with space for the identification of each revised item, page, or date, and the signature of the person approving the change for the Administrator.

#### § 21.443 Duration.

(a) A DAS authorization is effective until it is surrendered or the Administrator suspends, revokes, or otherwise terminates it.

(b) The DAS shall return the authorization certificate to the Administrator when it is no longer effective.

#### § 21.445 Maintenance of eligibility.

The DAS shall continue to meet the requirements for issue of the authorization or shall notify the Administrator within 48 hours of any change (including a change of personnel) that could affect the ability of the DAS to meet those requirements.

#### § 21.447 Transferability.

A DAS authorization is not transferable.

#### § 21.449 Inspections.

Upon request, each DAS and each applicant shall let the Administrator inspect his facilities, products, and records.

#### § 21.451 Limits of applicability.

(a) DAS authorizations apply only to products—

(1) Covered by the ratings of the repair station applicant;

(2) Covered by the operating certificate and maintenance manual of the air carrier or commercial operator applicant; and

(3) For which the manufacturer applicant has alteration authority under § 43.3(i) of this subchapter.

(b) DAS authorizations may be used for—

(1) The issue of supplemental type certificates;

(2) The issue of experimental certificates for aircraft that—

(i) Are altered by the DAS under a supplemental type certificate issued by the DAS; and

(ii) Require flight tests in order to show compliance with the applicable airworthiness requirements of this chapter; and

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(3) The amendment of standard airworthiness certificates for aircraft altered under this subpart.

(c) DAS authorizations are subject to any additional limitations prescribed by the Administrator after inspection of the applicant's facilities or review of the staff qualifications.

(d) Notwithstanding any other provision of this subpart, a DAS may not issue a supplemental type certificate involving the exhaust emissions change requirements of part 34 or the acoustical change requirements of part 36 of this chapter until the Administrator finds that those requirements are met.

[Amdt. 21-6, 30 FR 11379, Sept. 8, 1965; 30 FR 11849, Sept. 16, 1965, as amended by Amdt. 21-42, 40 FR 1034, Jan. 6, 1975; Amdt. 21-68, 55 FR 32860, Aug. 10, 1990]

## § 21.461 Equivalent safety provisions.

The DAS shall obtain the Administrator's concurrence on the application of all equivalent safety provisions applied under § 21.21.

## § 21.463 Supplemental type certificates.

(a) For each supplemental type certificate issued under this subpart, the DAS shall follow the procedure manual prescribed in § 21.441 and shall, before issuing the certificate—

(1) Submit to the Administrator a statement describing—

- (i) The type design change;
- (ii) The airworthiness requirements of this chapter (by part and effective date) that the DAS considers applicable; and
- (iii) The proposed program for meeting the applicable airworthiness requirements;

(2) Find that each applicable airworthiness requirement is met; and

(3) Find that the type of product for which the STC is to be issued, as modified by the supplemental type design data upon which the STC is based, is of proper design for safe operation.

(b) Within 30 days after the date of issue of the STC, the DAS shall submit to the Administrator—

- (1) Two copies of the STC;
- (2) One copy of the design data approved by the DAS and referred to in the STC;

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(3) One copy of each inspection and test report; and

(4) Two copies of each revision to the Aircraft Flight Manual or to the operating limitations, and any other information necessary for safe operation of the product.

## § 21.473 Airworthiness certificates other than experimental.

For each amendment made to a standard airworthiness certificate under this subpart, the DAS shall follow the procedure manual prescribed in § 21.441 and shall, before making that amendment—

(a) Complete each flight test necessary to meet the applicable airworthiness requirements of this chapter;

(b) Find that each applicable airworthiness requirement of this chapter is met; and

(c) Find that the aircraft is in condition for safe operation.

## § 21.475 Experimental certificates.

The DAS shall, before issuing an experimental certificate, obtain from the Administrator any limitations and conditions that the Administrator considers necessary for safety.

## § 21.477 Data review and service experience.

(a) If the Administrator finds that a product for which an STC was issued under this subpart does not meet the applicable airworthiness requirements, or that an unsafe feature or characteristic caused by a defect in design or manufacture exists, the DAS, upon notification by the Administrator, shall investigate the matter and report to the Administrator the results of the investigation and the action, if any, taken or proposed.

(b) If corrective action by the user of the product is necessary for safety because of any noncompliance or defect specified in paragraph (a) of this section, the DAS shall submit the information necessary for the issue of an Airworthiness Directive under Part 39.

## § 21.493 Current records.

(a) The DAS shall maintain, at its facility, current records containing—

(1) For each product for which it has issued an STC under this subpart, a technical data file that includes any data and amendments thereto (including drawings, photographs, specifications, instructions, and reports) necessary for the STC;

(2) A list of products by make, model, manufacturer's serial number and, if applicable, any FAA identification, that have been altered under the DAS authorization; and

(3) A file of information from all available sources on alteration difficulties of products altered under the DAS authorization.

(b) The records prescribed in paragraph (a) of this section shall be—

(1) Made available by the DAS, upon the Administrator's request, for examination by the Administrator at any time; and

(2) In the case of the data file prescribed in paragraph (a)(1) of this section, identified by the DAS and sent to the Administrator as soon as the DAS no longer operates under this subpart.

### **Subpart N—Approval of Engines, Propellers, Materials, Parts, and Appliances: Import**

#### **§ 21.500 Approval of engines and propellers.**

Each holder or licensee of a U.S. type certificate for an aircraft engine or propeller manufactured in a foreign country with which the United States has an agreement for the acceptance of those products for export and import, shall furnish with each such aircraft engine or propeller imported into this country, a certificate of airworthiness for export issued by the country of manufacture certifying that the individual aircraft engine or propeller—

(a) Conforms to its U.S. type certificate and is in condition for safe operation; and

(b) Has been subjected by the manufacturer to a final operational check.

[Amdt. 21–25, 34 FR 14068, Sept. 5, 1969]

#### **§ 21.502 Approval of materials, parts, and appliances.**

(a) A material, part, or appliance, manufactured in a foreign country with which the United States has an

agreement for the acceptance of those materials, parts, or appliances for export and import, is considered to meet the requirements for approval in the Federal Aviation Regulations when the country of manufacture issues a certificate of airworthiness for export certifying that the individual material, part, or appliance meets those requirements, unless the Administrator finds, based on the technical data submitted under paragraph (b) of this section, that the material, part, or appliance is otherwise not consistent with the intent of the Federal Aviation Regulations.

(b) An applicant for approval of a material, part, or appliance must, upon request, submit to the Administrator any technical data respecting that material, part, or appliance.

[Amdt. 21–25, 34 FR 14068, Sept. 5, 1969]

### **Subpart O—Technical Standard Order Authorizations**

SOURCE: Docket No. 19589, 45 FR 38346, June 9, 1980, unless otherwise noted.

#### **§ 21.601 Applicability.**

(a) This subpart prescribes—

(1) Procedural requirements for the issue of Technical Standard Order authorizations;

(2) Rules governing the holders of Technical Standard Order authorizations; and

(3) Procedural requirements for the issuance of a letter of Technical Standard Order design approval.

(b) For the purpose of this subpart—

(1) A Technical Standard Order (referred to in this subpart as “TSO”) is issued by the Administrator and is a minimum performance standard for specified articles (for the purpose of this subpart, articles means materials, parts, processes, or appliances) used on civil aircraft.

(2) A TSO authorization is an FAA design and production approval issued to the manufacturer of an article which has been found to meet a specific TSO.

(3) A letter of TSO design approval is an FAA design approval for a foreign-manufactured article which has been

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found to meet a specific TSO in accordance with the procedures of § 21.617.

(4) An article manufactured under a TSO authorization, an FAA letter of acceptance as described in § 21.603(b), or an appliance manufactured under a letter of TSO design approval described in § 21.617 is an approved article or appliance for the purpose of meeting the regulations of this chapter that require the article to be approved.

(5) An article manufacturer is the person who controls the design and quality of the article produced (or to be produced, in the case of an application), including the parts of them and any processes or services related to them that are procured from an outside source.

(c) The Administrator does not issue a TSO authorization if the manufacturing facilities for the product are located outside of the United States, unless the Administrator finds that the location of the manufacturer's facilities places no undue burden on the FAA in administering applicable airworthiness requirements.

#### § 21.603 TSO marking and privileges.

(a) Except as provided in paragraph (b) of this section and § 21.617(c), no person may identify an article with a TSO marking unless that person holds a TSO authorization and the article meets applicable TSO performance standards.

(b) The holder of an FAA letter of acceptance of a statement of conformance issued for an article before July 1, 1962, or any TSO authorization issued after July 1, 1962, may continue to manufacture that article without obtaining a new TSO authorization but shall comply with the requirements of §§ 21.3, 21.607 through 21.615, 21.619, and 21.621.

(c) Notwithstanding paragraphs (a) and (b) of this section, after August 6, 1976, no person may identify or mark an article with any of the following TSO numbers:

- (1) TSO-C18, -C18a, -C18b, -C18c.
- (2) TSO-C24.
- (3) TSO-C33.
- (4) TSO-C61 or C61a.

#### § 21.605 Application and issue.

(a) The manufacturer (or an authorized agent) shall submit an application for a TSO authorization, together with the following documents, to the Manager of the Aircraft Certification Office for the geographic area in which the applicant is located:

(1) A statement of conformance certifying that the applicant has met the requirements of this subpart and that the article concerned meets the applicable TSO that is effective on the date of application for that article.

(2) One copy of the technical data required in the applicable TSO.

(3) A description of its quality control system in the detail specified in § 21.143. In complying with this section, the applicant may refer to current quality control data filed with the FAA as part of a previous TSO authorization application.

(b) When a series of minor changes in accordance with § 21.611 is anticipated, the applicant may set forth in its application the basic model number of the article and the part number of the components with open brackets after it to denote that suffix change letters or numbers (or combinations of them) will be added from time to time.

(c) After receiving the application and other documents required by paragraph (a) of this section to substantiate compliance with this part, and after a determination has been made of its ability to produce duplicate articles under this part, the Administrator issues a TSO authorization (including all TSO deviations granted to the applicant) to the applicant to identify the article with the applicable TSO marking.

(d) If the application is deficient, the applicant must, when requested by the Administrator, submit any additional information necessary to show compliance with this part. If the applicant fails to submit the additional information within 30 days after the Administrator's request, the application is denied and the applicant is so notified.

(e) The Administrator issues or denies the application within 30 days

after its receipt or, if additional information has been requested, within 30 days after receiving that information.

[Doc. No. 19589, 45 FR 38346, June 9, 1980, as amended by Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

**§21.607 General rules governing holders of TSO authorizations.**

Each manufacturer of an article for which a TSO authorization has been issued under this part shall—

(a) Manufacture the article in accordance with this part and the applicable TSO;

(b) Conduct all required tests and inspections and establish and maintain a quality control system adequate to ensure that the article meets the requirements of paragraph (a) of this section and is in condition for safe operation;

(c) Prepare and maintain, for each model of each article for which a TSO authorization has been issued, a current file of complete technical data and records in accordance with §21.613; and

(d) Permanently and legibly mark each article to which this section applies with the following information:

(1) The name and address of the manufacturer.

(2) The name, type, part number, or model designation of the article.

(3) The serial number or the date of manufacture of the article or both.

(4) The applicable TSO number.

**§21.609 Approval for deviation.**

(a) Each manufacturer who requests approval to deviate from any performance standard of a TSO shall show that the standards from which a deviation is requested are compensated for by factors or design features providing an equivalent level of safety.

(b) The request for approval to deviate, together with all pertinent data, must be submitted to the Manager of the Aircraft Certification Office for the geographic area in which the manufacturer is located. If the article is manufactured in another country, the request for approval to deviate, together with all pertinent data, must be submitted through the civil aviation authority in that country to the FAA.

[Doc. No. 19589, 45 FR 38346, June 9, 1980, as amended by Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

**§21.611 Design changes.**

(a) *Minor changes by the manufacturer holding a TSO authorization.* The manufacturer of an article under an authorization issued under this part may make minor design changes (any change other than a major change) without further approval by the Administrator. In this case, the changed article keeps the original model number (part numbers may be used to identify minor changes) and the manufacturer shall forward to the appropriate Aircraft Certification Office for the geographic area, any revised data that are necessary for compliance with §21.605(b).

(b) *Major changes by manufacturer holding a TSO authorization.* Any design change by the manufacturer that is extensive enough to require a substantially complete investigation to determine compliance with a TSO is a major change. Before making such a change, the manufacturer shall assign a new type or model designation to the article and apply for an authorization under §21.605.

(c) *Changes by person other than manufacturer.* No design change by any person (other than the manufacturer who submitted the statement of conformance for the article) is eligible for approval under this part unless the person seeking the approval is a manufacturer and applies under §21.605(a) for a separate TSO authorization. Persons other than a manufacturer may obtain approval for design changes under Part 43 or under the applicable airworthiness regulations.

[Doc. No. 19589, 45 FR 38346, June 9, 1980, as amended by Amdt. 21-67, 54 FR 39291, Sept. 25, 1989]

**§21.613 Recordkeeping requirements.**

(a) *Keeping the records.* Each manufacturer holding a TSO authorization under this part shall, for each article manufactured under that authorization, keep the following records at its factory:

(1) A complete and current technical data file for each type or model article, including design drawings and specifications.

(2) Complete and current inspection records showing that all inspections

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and tests required to ensure compliance with this part have been properly completed and documented.

(b) *Retention of records.* The manufacturer shall retain the records described in paragraph (a)(1) of this section until it no longer manufactures the article. At that time, copies of these records shall be sent to the Administrator. The manufacturer shall retain the records described in paragraph (a)(2) of this section for a period of at least 2 years.

## §21.615 FAA inspection.

Upon the request of the Administrator, each manufacturer of an article under a TSO authorization shall allow the Administrator to—

- (a) Inspect any article manufactured under that authorization;
- (b) Inspect the manufacturer's quality control system;
- (c) Witness any tests;
- (d) Inspect the manufacturing facilities; and
- (e) Inspect the technical data files on that article.

## §21.617 Issue of letters of TSO design approval: import appliances.

(a) A letter of TSO design approval may be issued for an appliance that is manufactured in a foreign country with which the United States has an agreement for the acceptance of these appliances for export and import and that is to be imported into the United States if—

(1) The country in which the appliance was manufactured certifies that the appliance has been examined, tested, and found to meet the applicable TSO designated in §21.305(b) or the applicable performance standards of the country in which the appliance was manufactured and any other performance standards the Administrator may prescribe to provide a level of safety equivalent to that provided by the TSO designated in §21.305(b); and

(2) The manufacturer has submitted one copy of the technical data required in the applicable performance standard through its civil aviation authority.

(b) The letter of TSO design approval will be issued by the Administrator and must list any deviation granted to the manufacturer under §21.609.

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(c) After the Administrator has issued a letter of TSO design approval and the country of manufacture issues a Certificate of Airworthiness for Export as specified in §21.502(a), the manufacturer shall be authorized to identify the appliance with the TSO marking requirements described in §21.607(d) and in the applicable TSO. Each appliance must be accompanied by a Certificate of Airworthiness for Export as specified in §21.502(a) issued by the country of manufacture.

## §21.619 Noncompliance.

The Administrator may, upon notice, withdraw the TSO authorization or letter of TSO design approval of any manufacturer who identifies with a TSO marking an article not meeting the performance standards of the applicable TSO.

## §21.621 Transferability and duration.

A TSO authorization or letter of TSO design approval issued under this part is not transferable and is effective until surrendered, withdrawn, or otherwise terminated by the Administrator.

## PART 23—AIRWORTHINESS STANDARDS: NORMAL, UTILITY, ACROBATIC, AND COMMUTER CATEGORY AIRPLANES

SPECIAL FEDERAL AVIATION REGULATION NO.  
23

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